

FIG. 1A

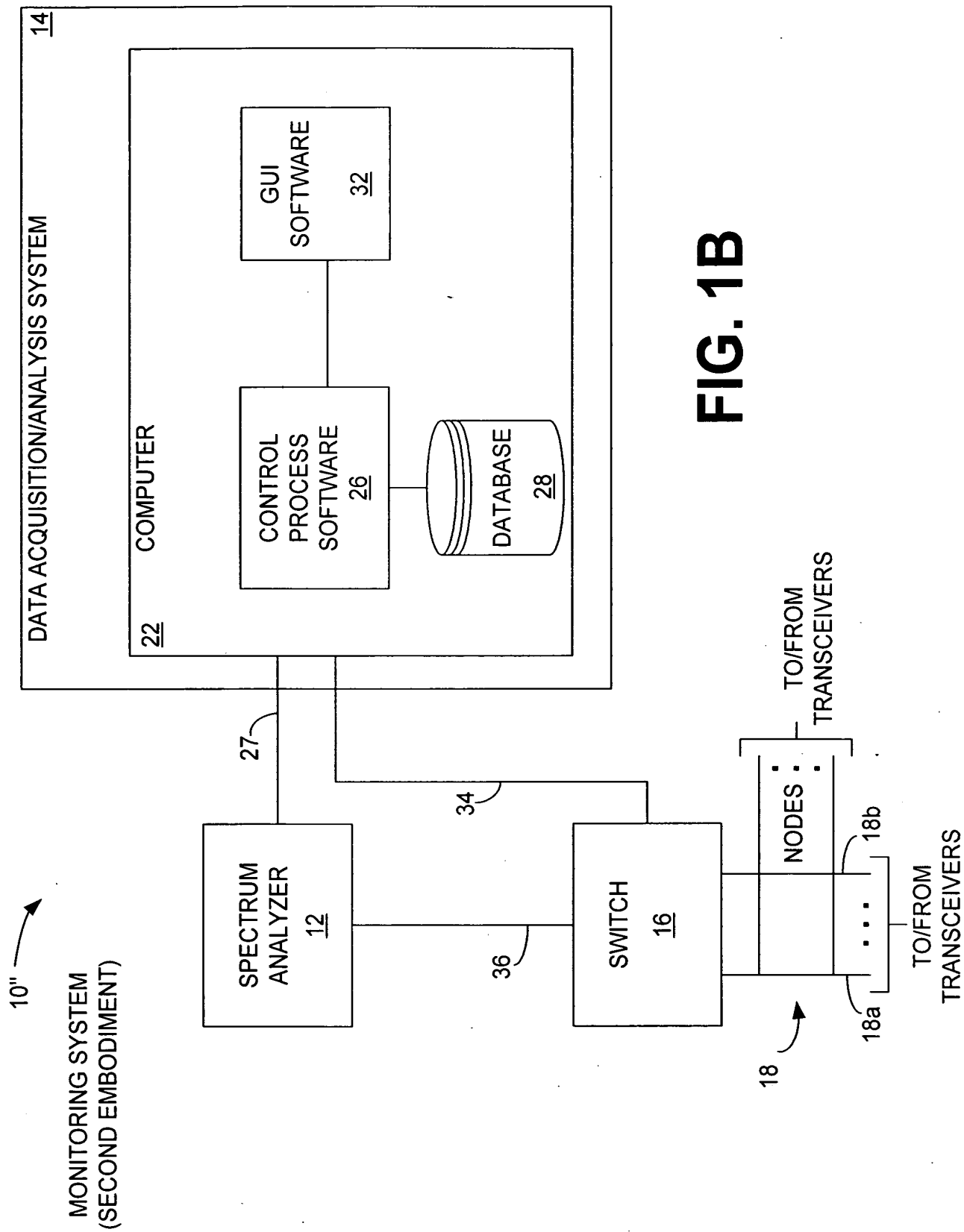
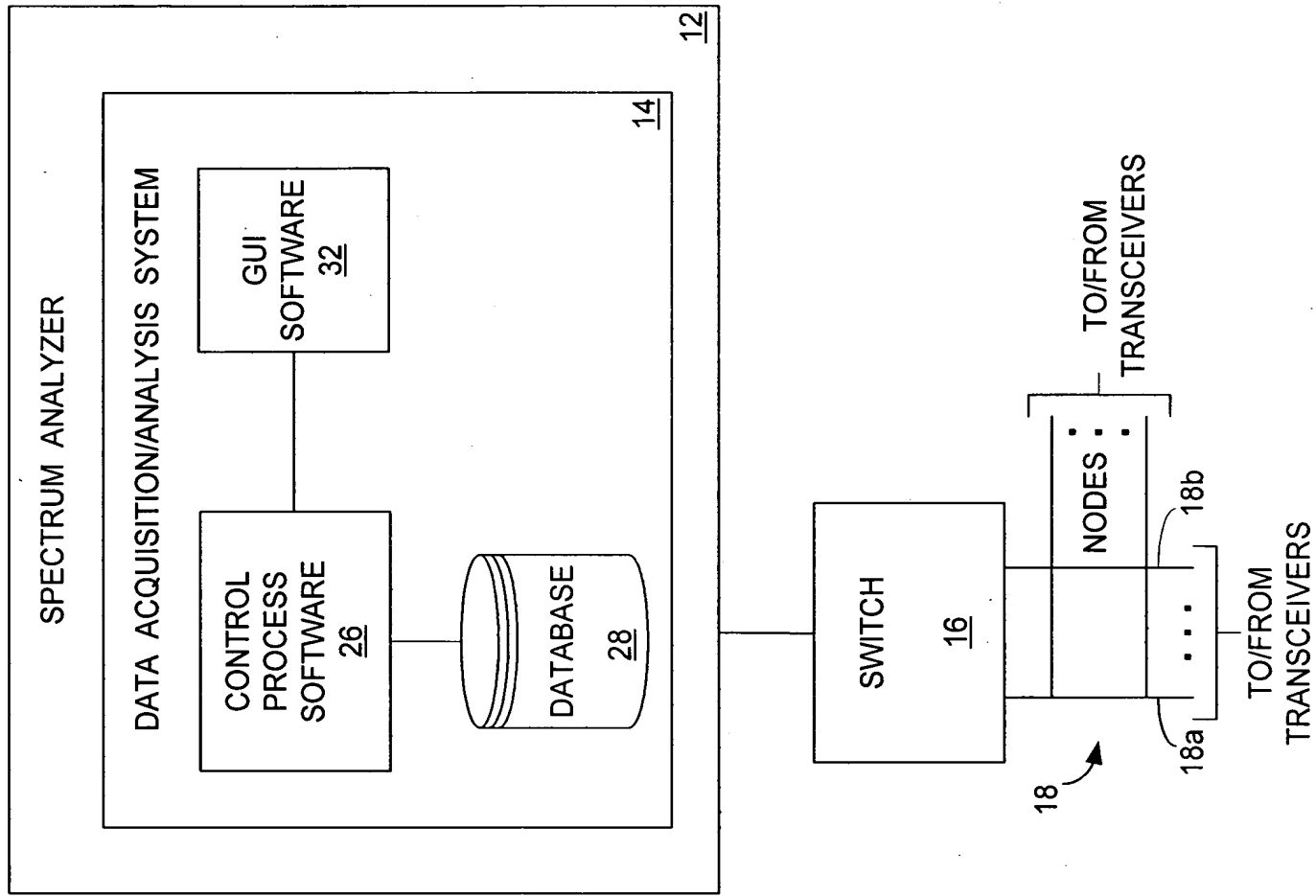


FIG. 1B



MONITORING SYSTEM
(THIRD EMBODIMENT)

FIG. 1C

DATA STRUCTURE OF DATABASE

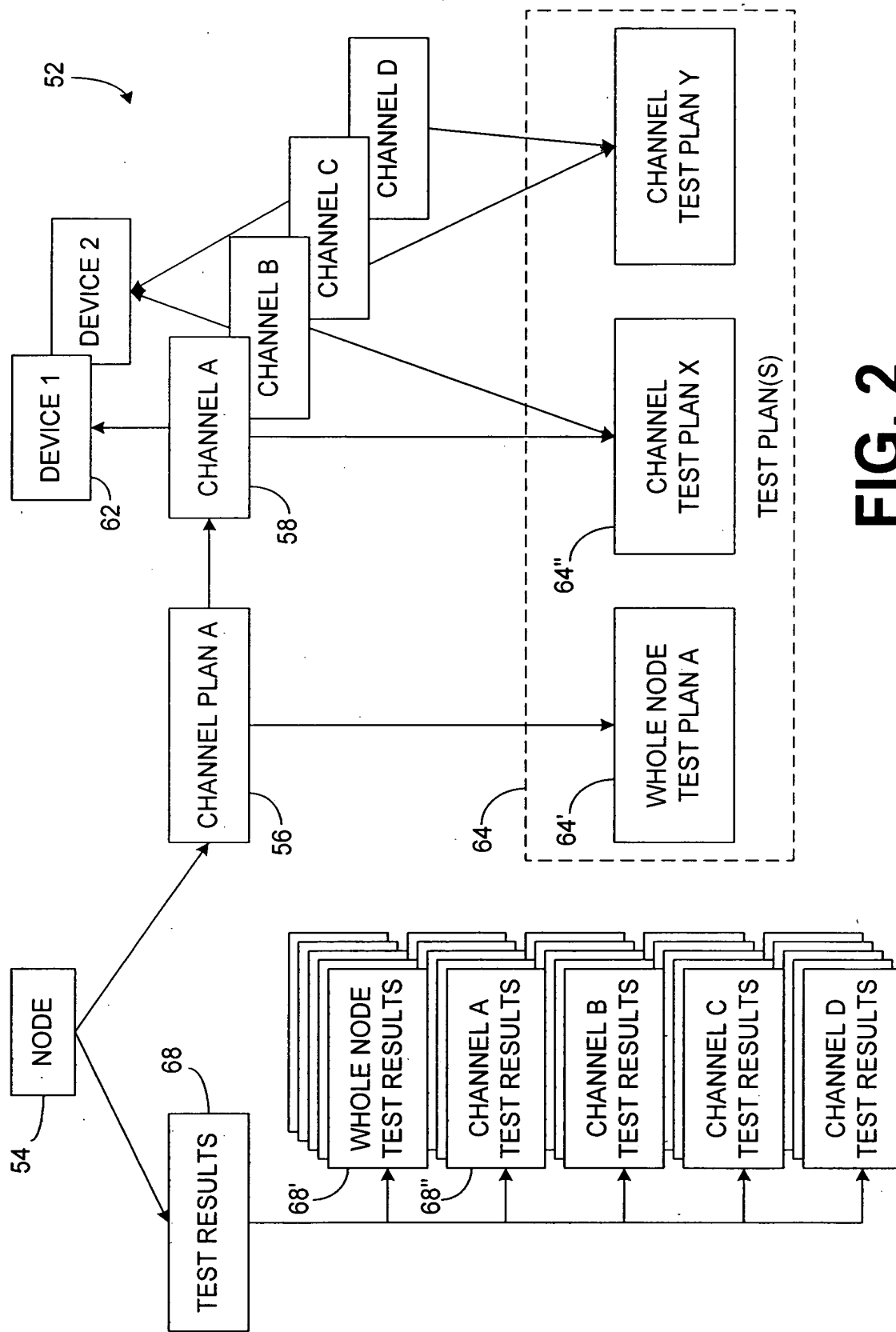
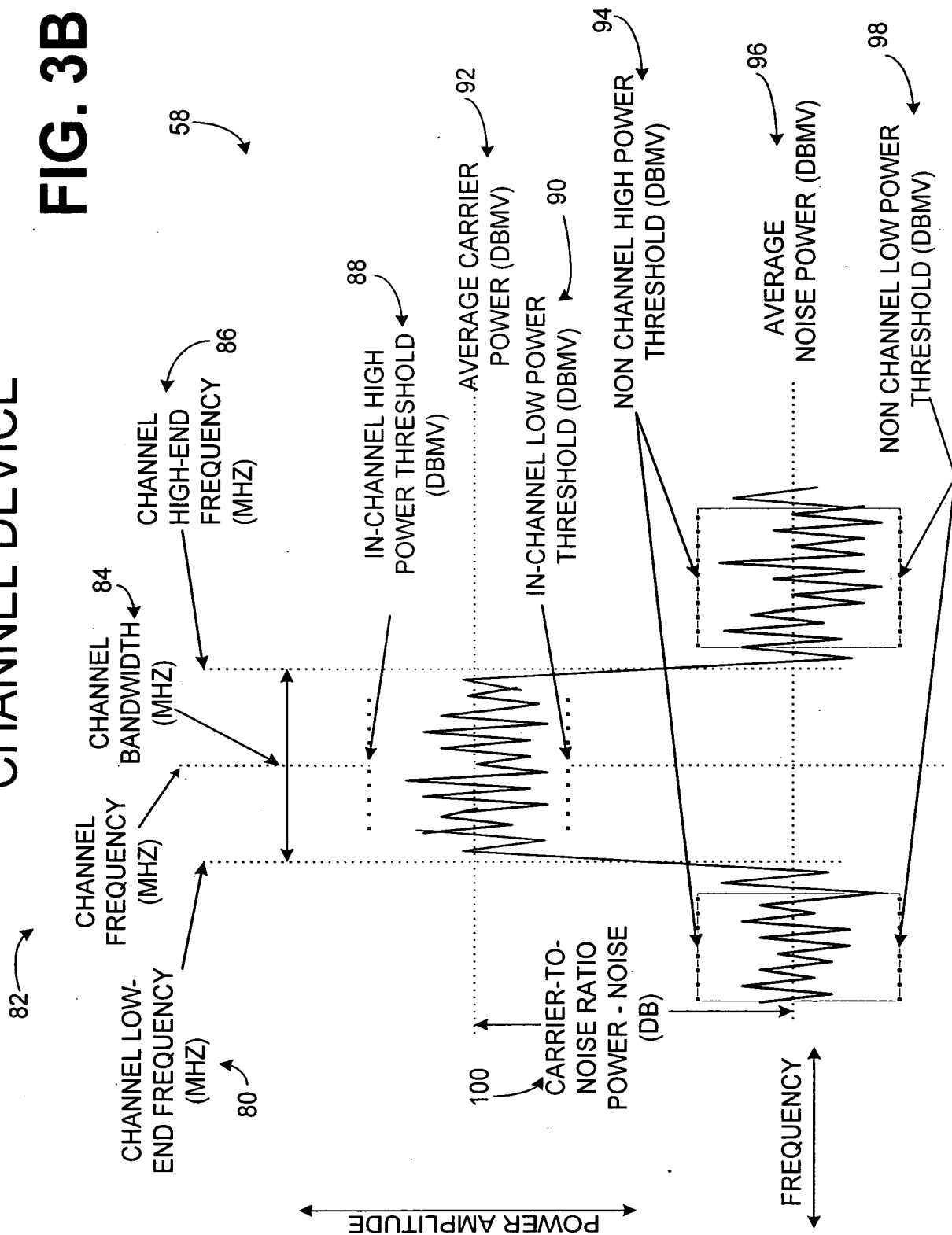


FIG. 2

CHANNEL DEVICE

FIG. 3B



TEST PLAN

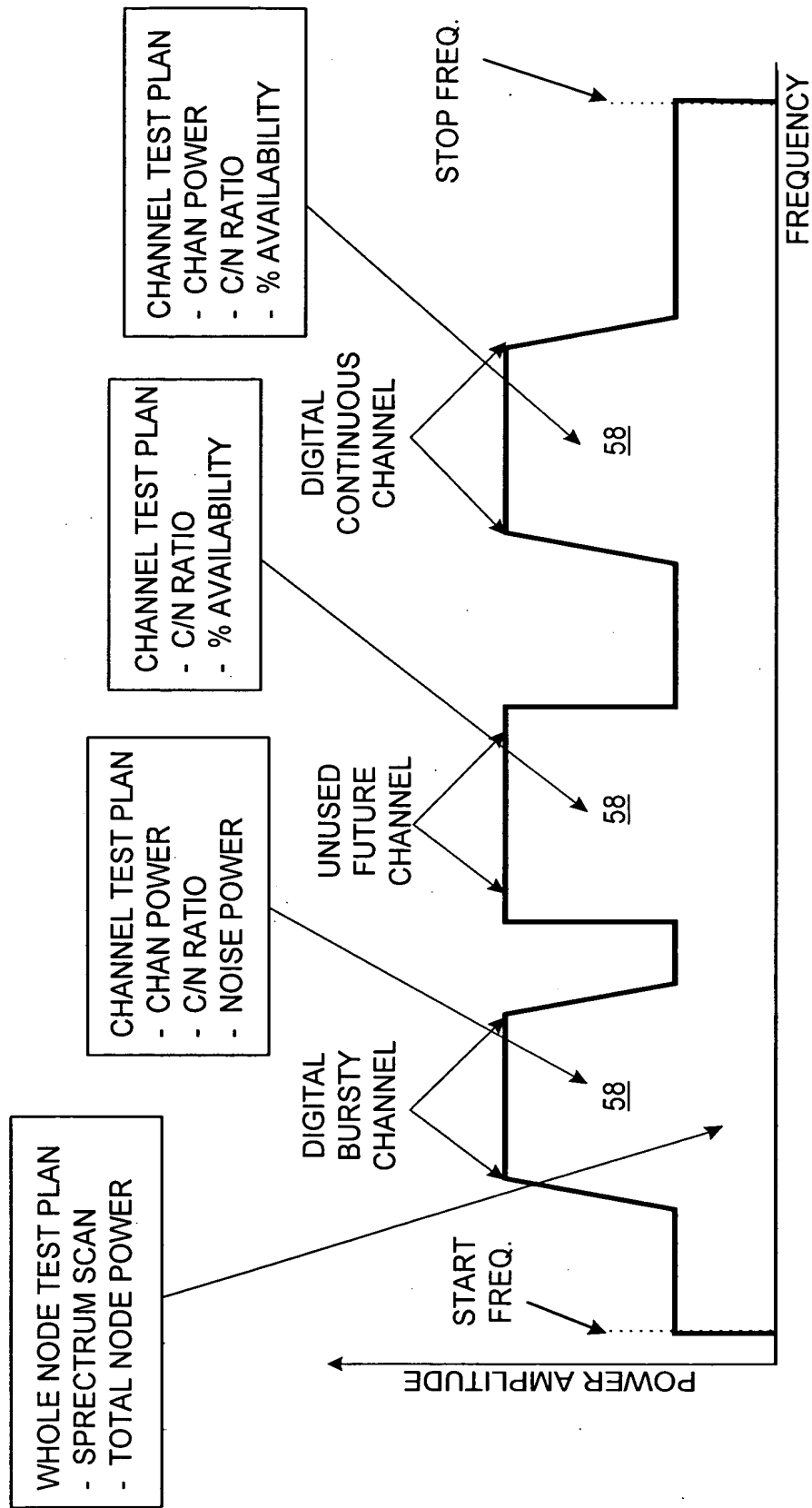


FIG. 3C

SPECTRUM SCAN TEST (WHOLE NODE)

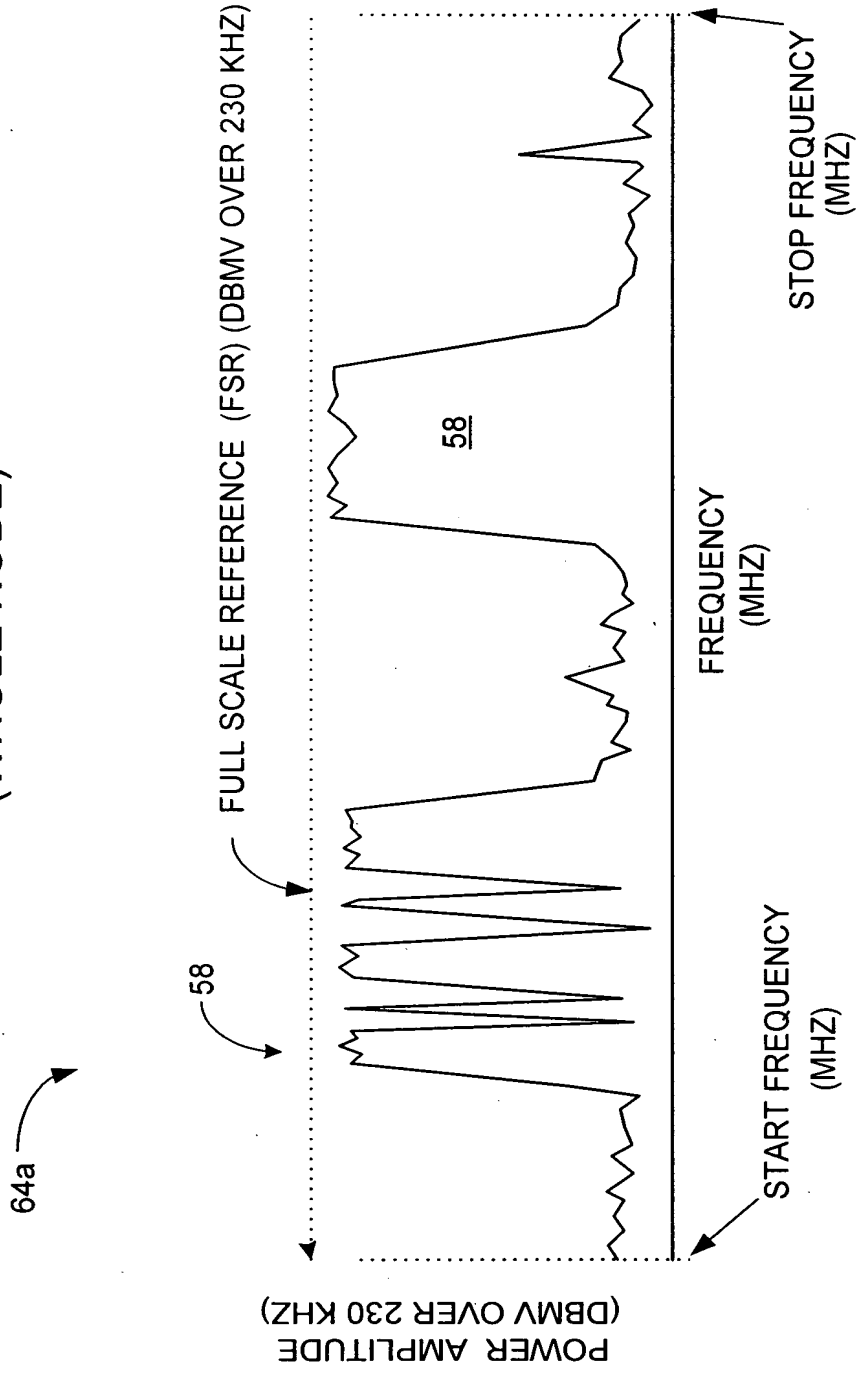


FIG. 3D

SPECTRUM SCAN TEST (ALARM LIMITS)

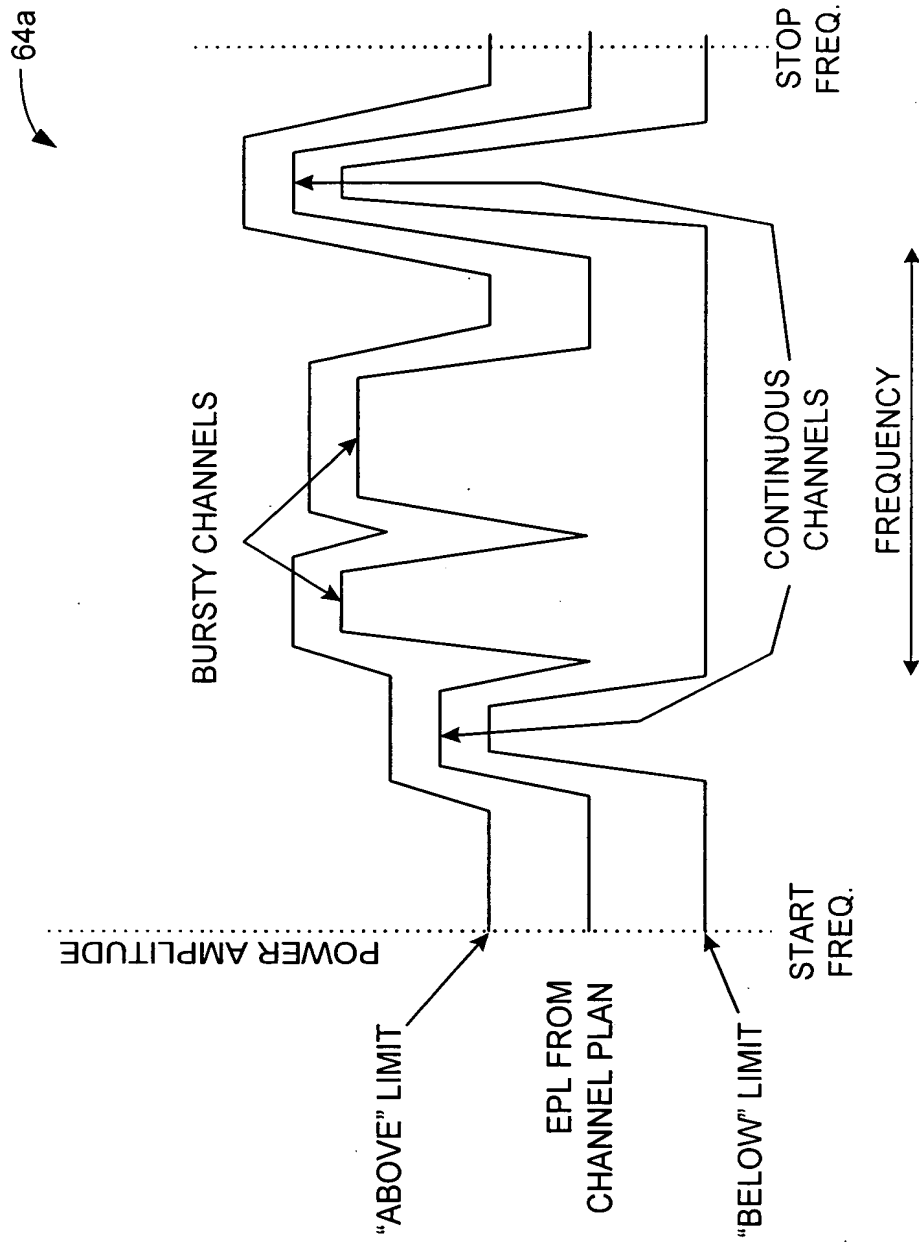


FIG. 3E

TOTAL NODE POWER TEST (WHOLE NODE)

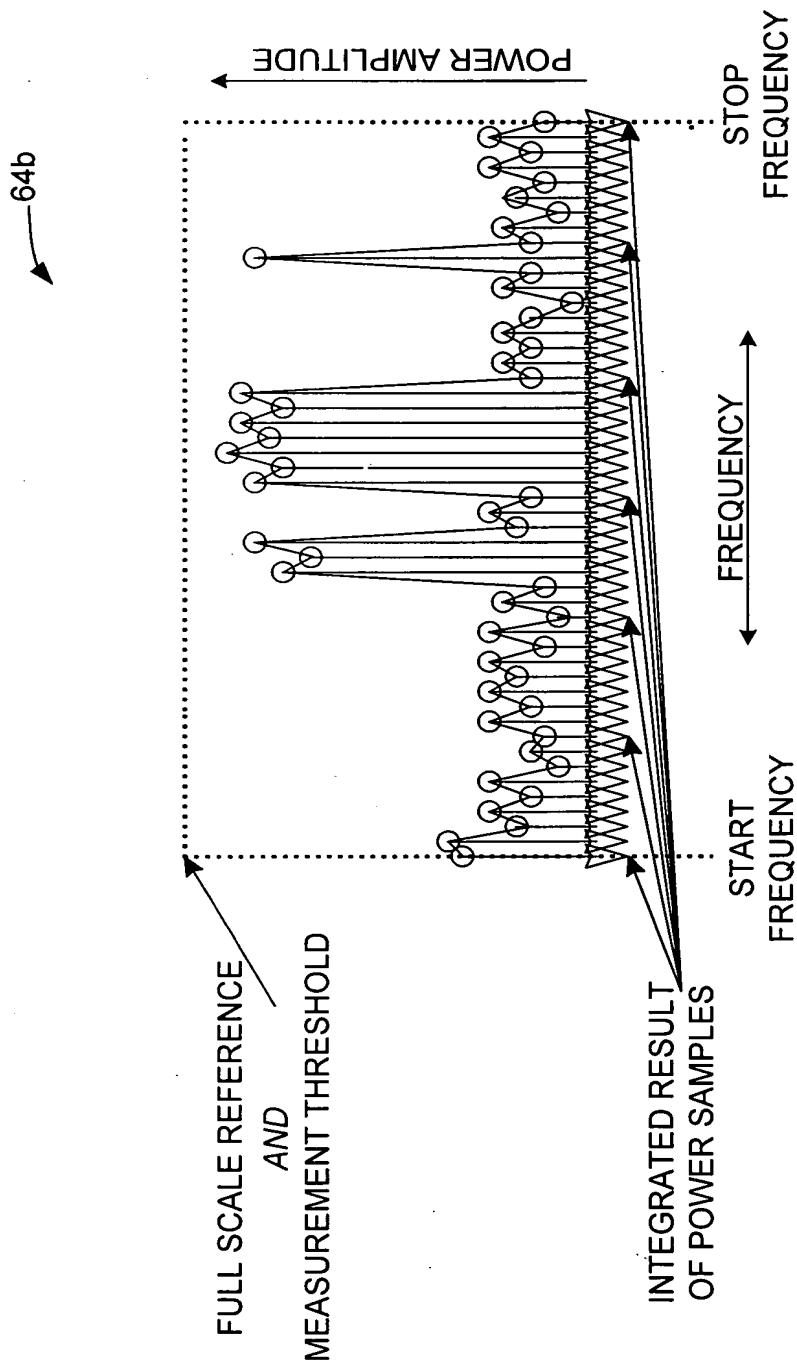


FIG. 3F

AVERAGE NOISE POWER TEST (CHANNEL)

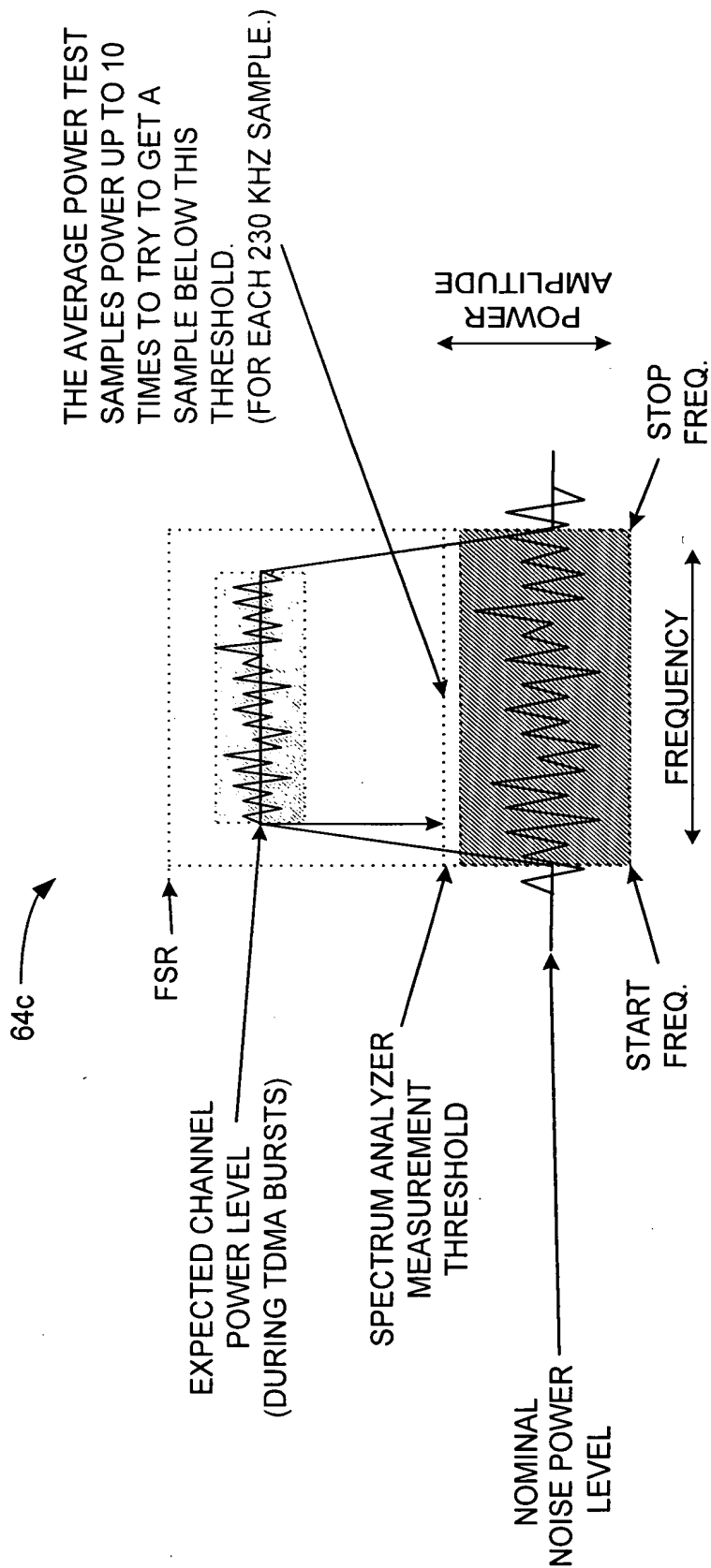


FIG. 3G

AVERAGE NOISE POWER TEST (ALARM LIMITS)

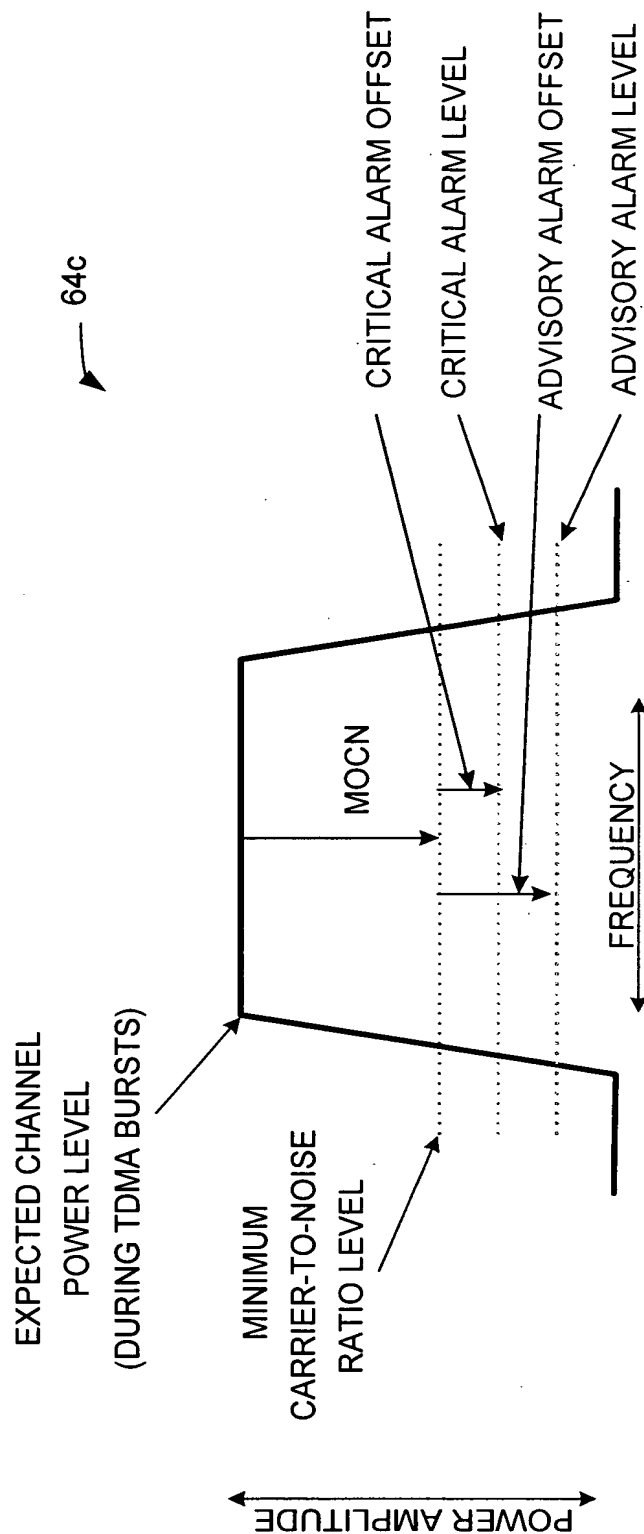


FIG. 3H

CHANNEL POWER TEST (CHANNEL)

64d

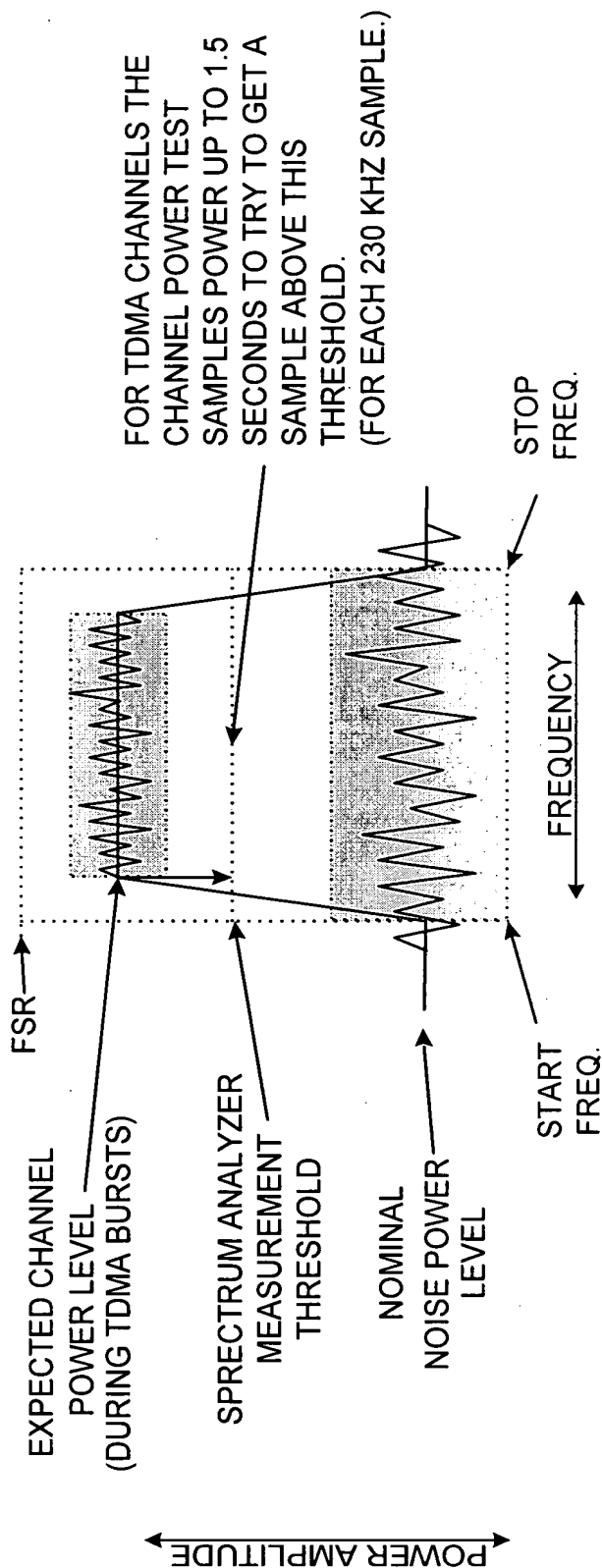


FIG. 31

CHANNEL POWER TEST (ALARM LIMITS)

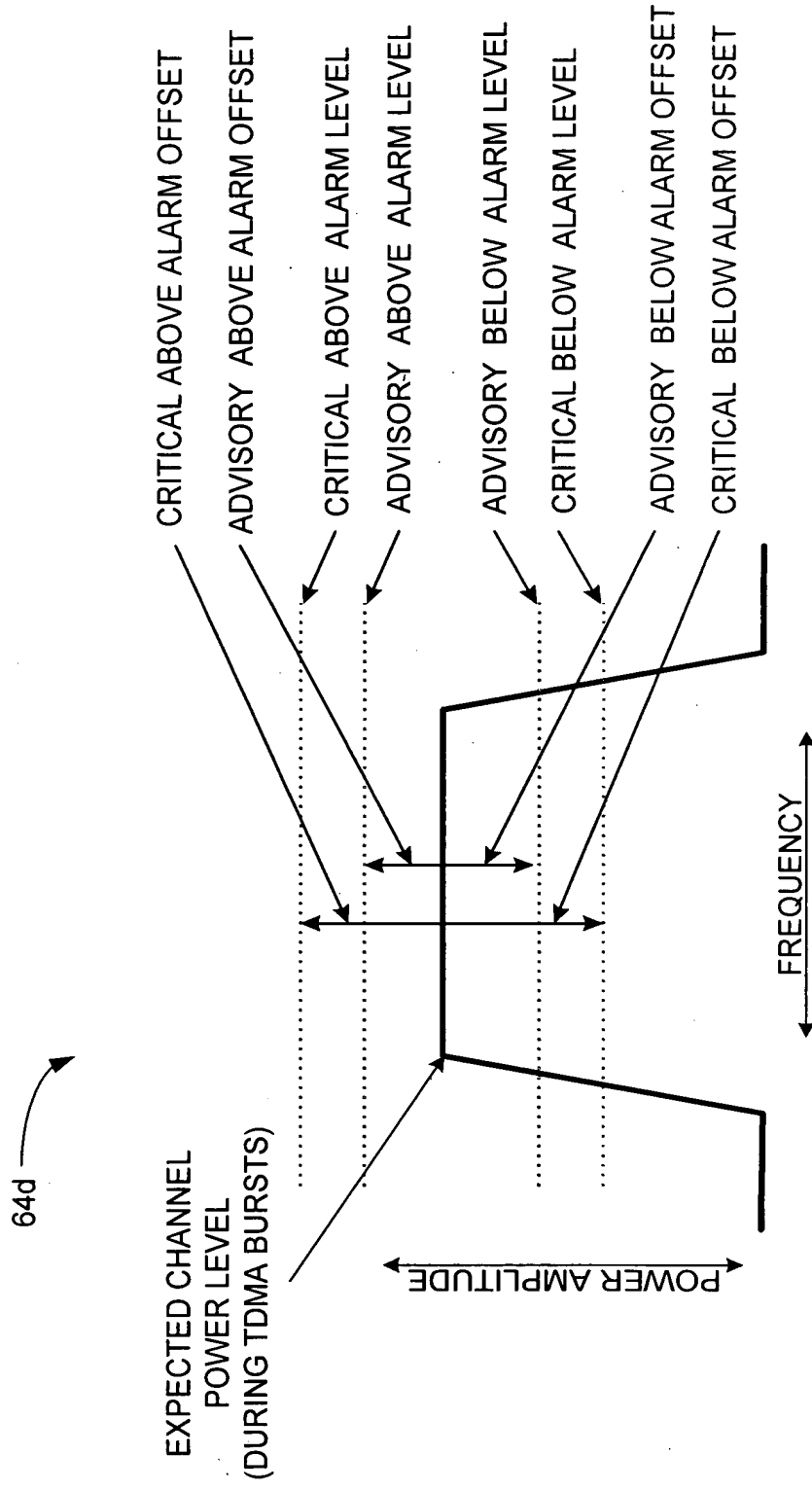


FIG. 3J

CHANNEL POWER TEST (TDMA BURSTS)

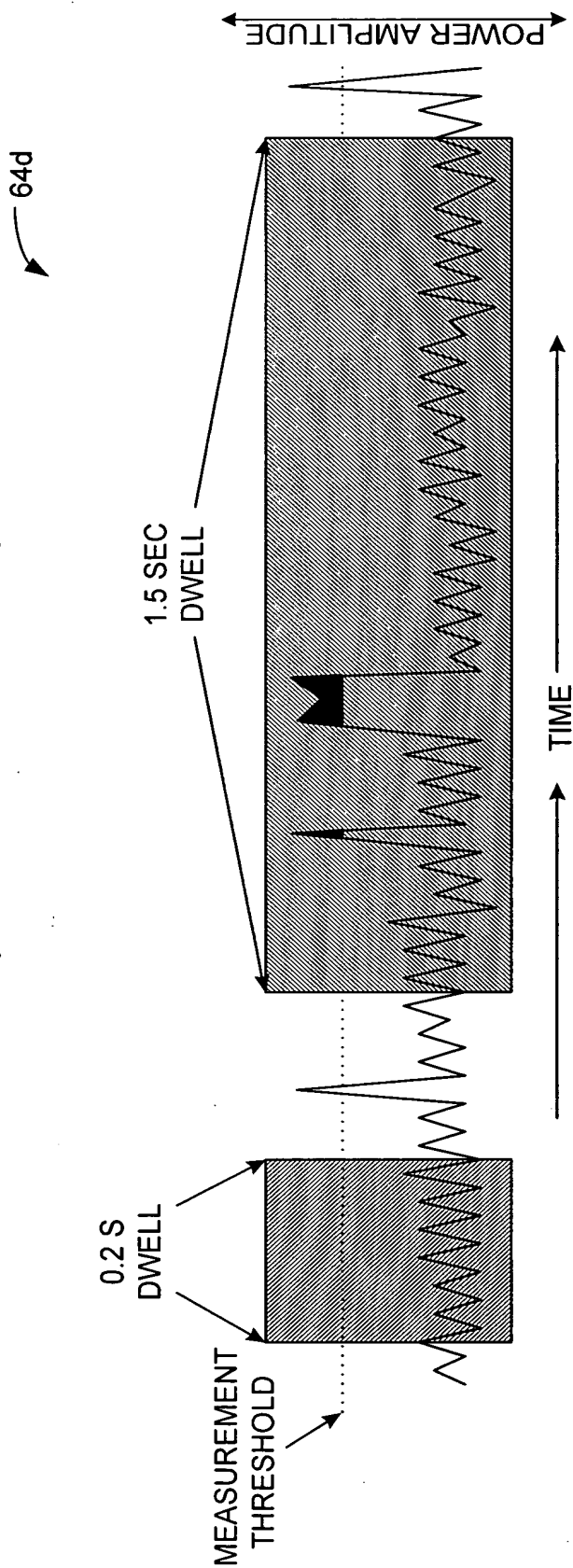


FIG. 3K

C/N TEST (CHANNEL)

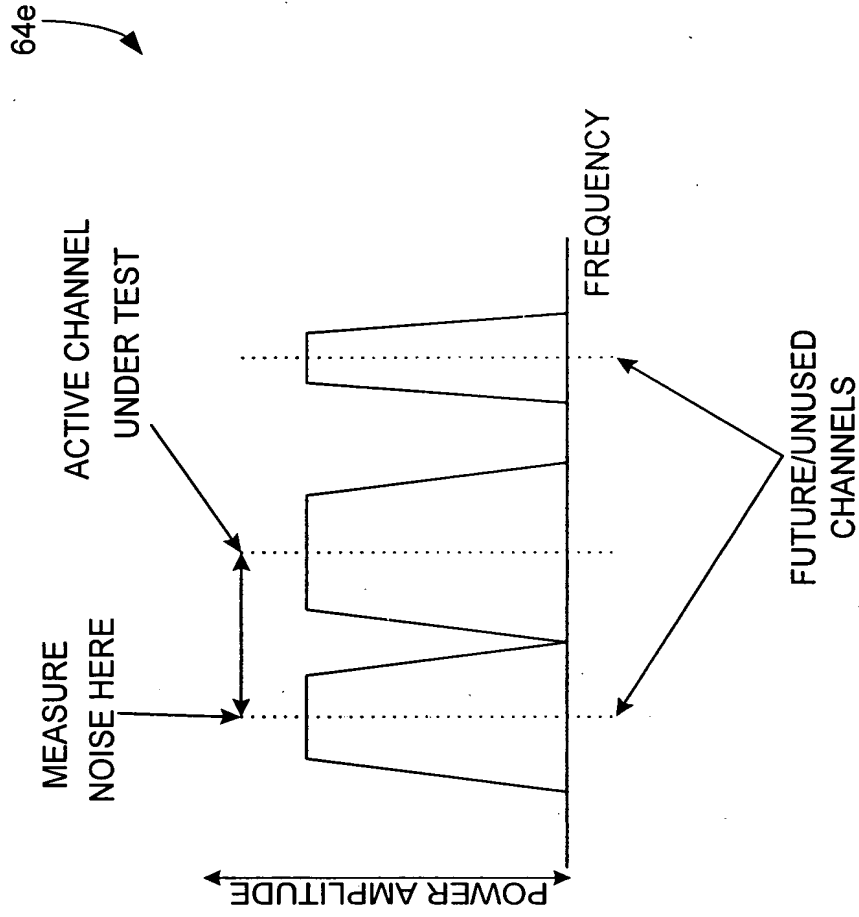


FIG. 3L

BURST COUNTER TEST (CHANNEL)

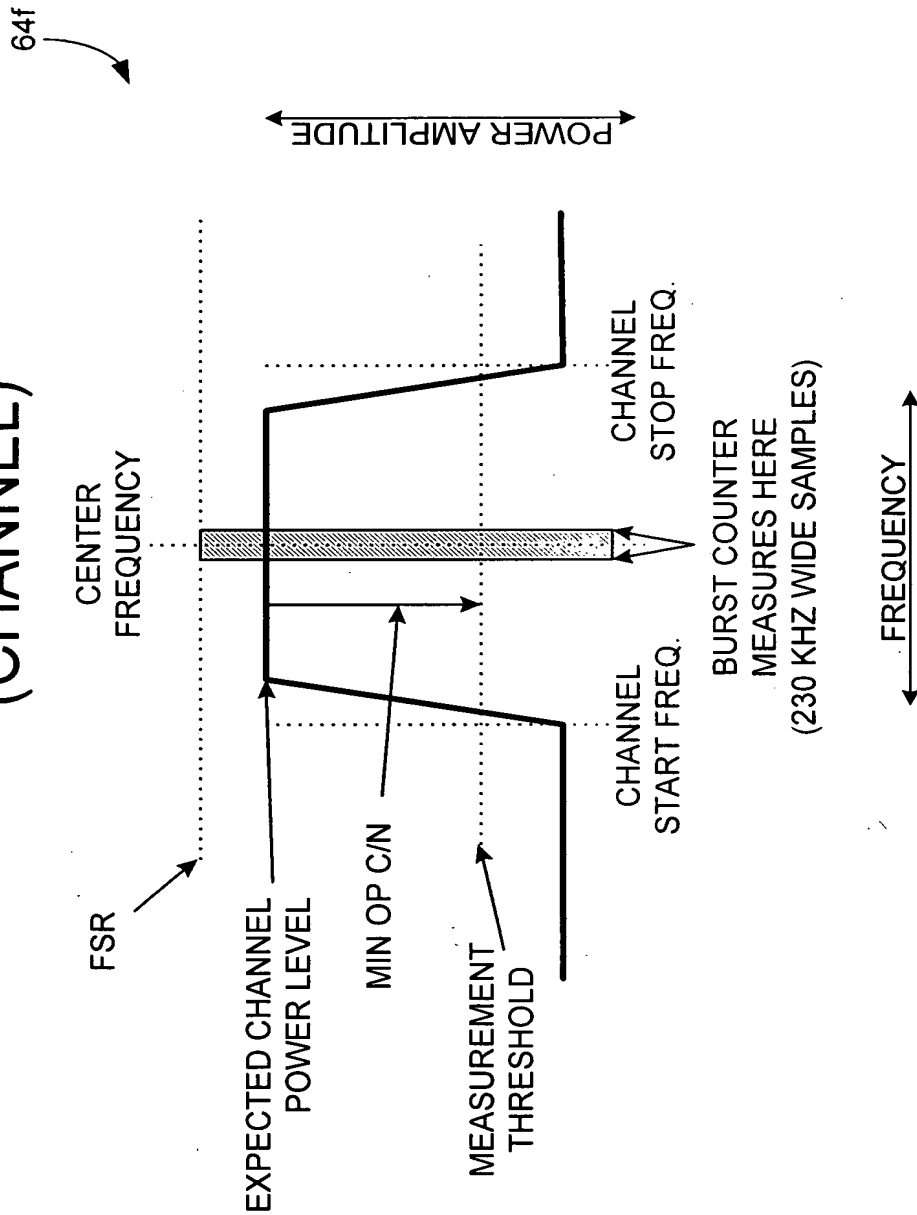


FIG. 3M

PERCENT AVAILABILITY TEST (CHANNEL)

64g

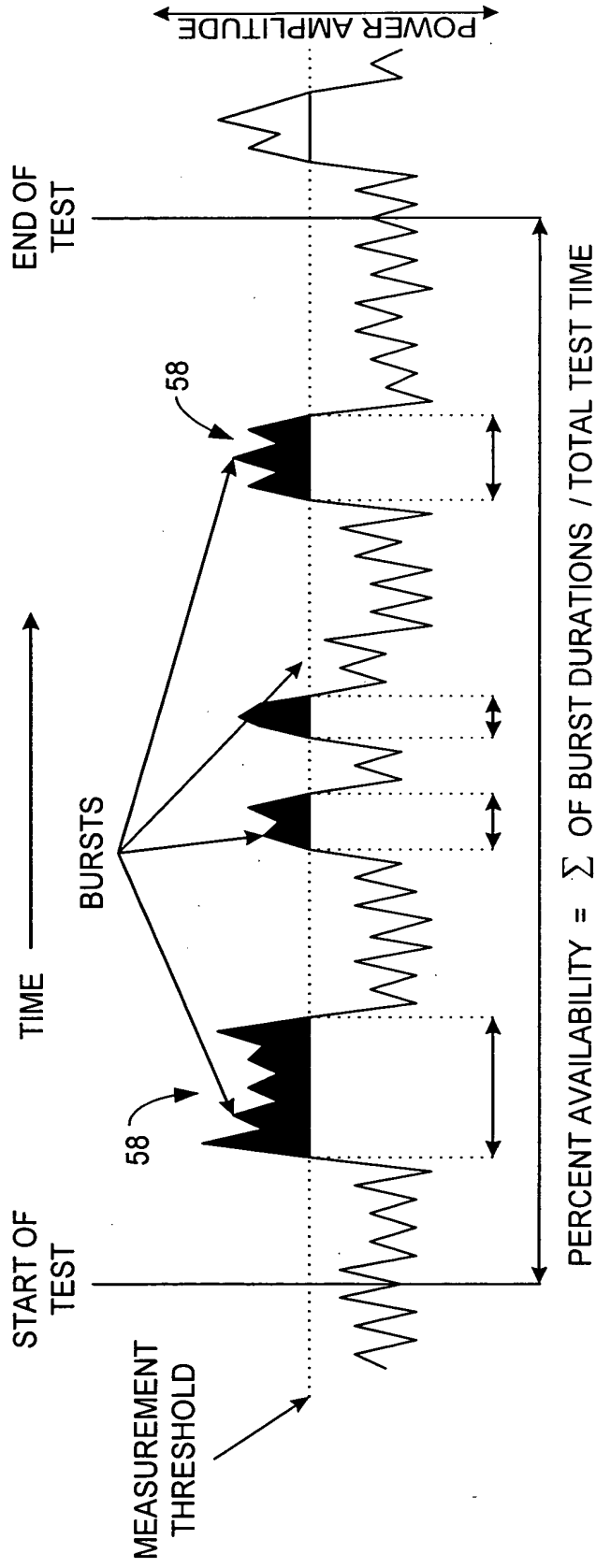


FIG. 3N

PERCENT AVAILABILITY TEST (ACTIVE CHANNELS)

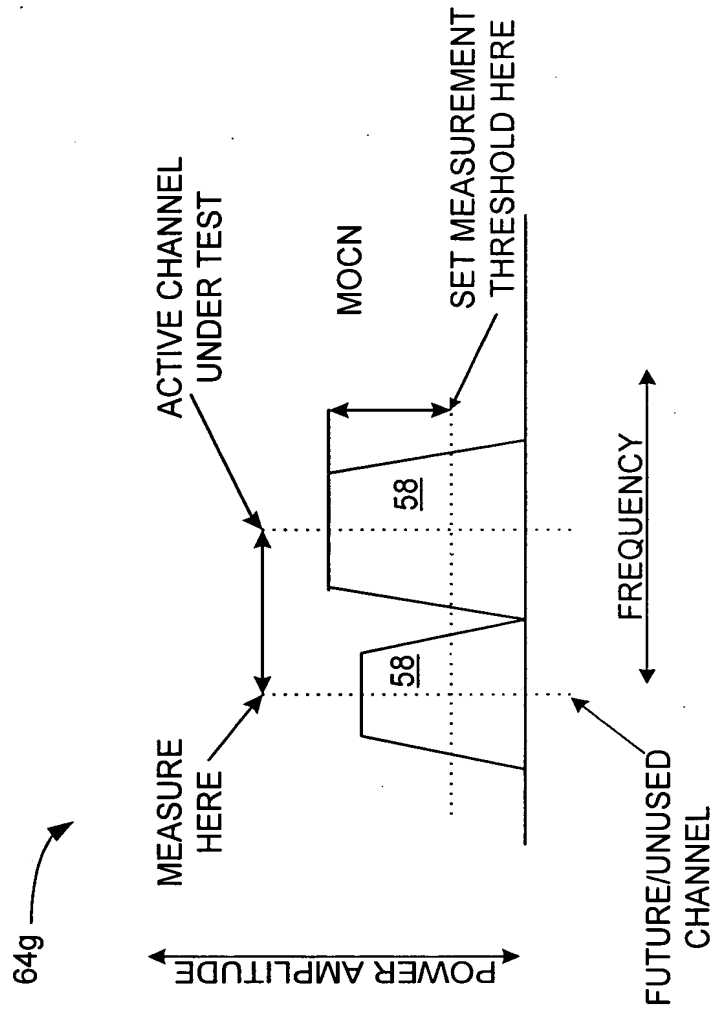


FIG. 30

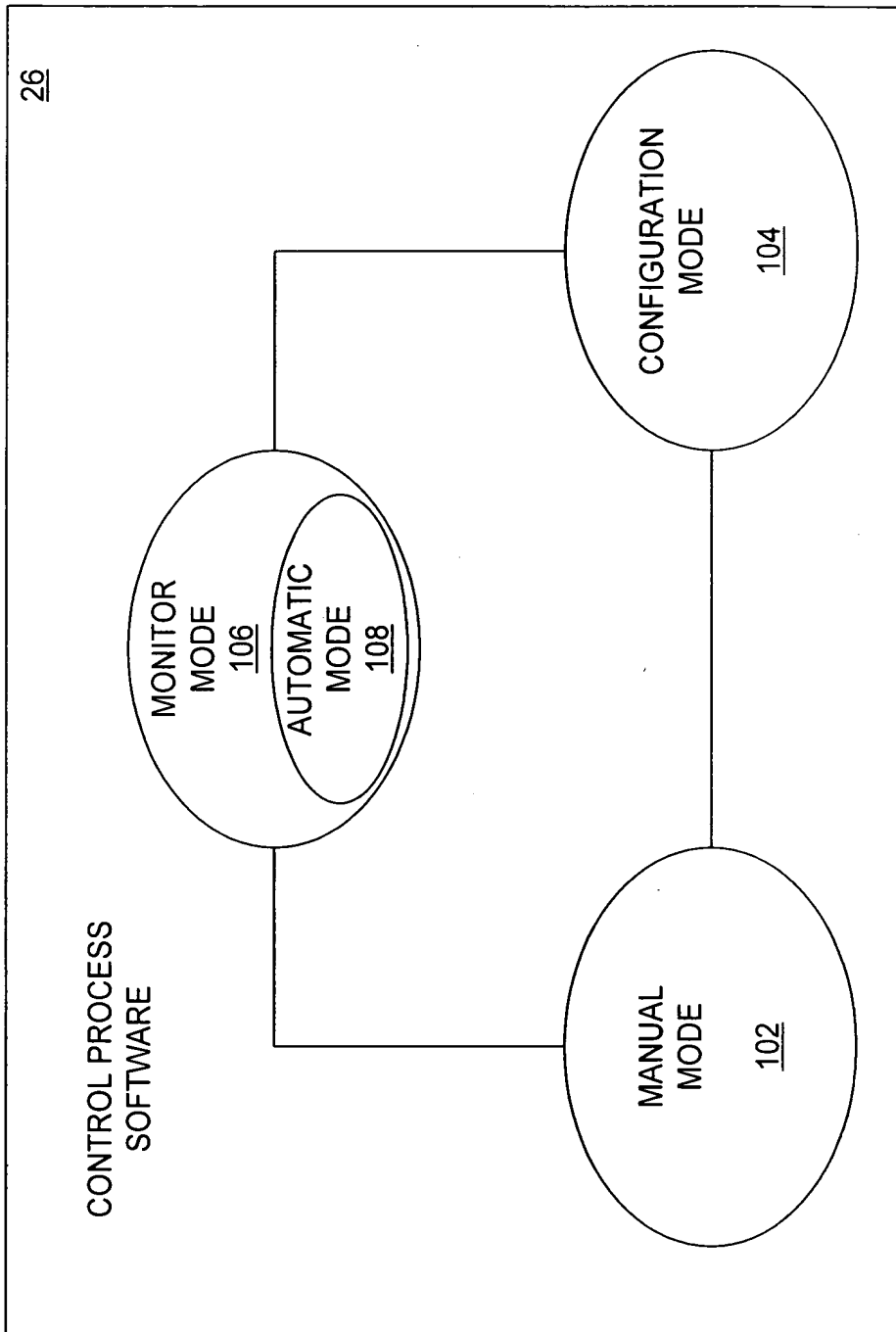
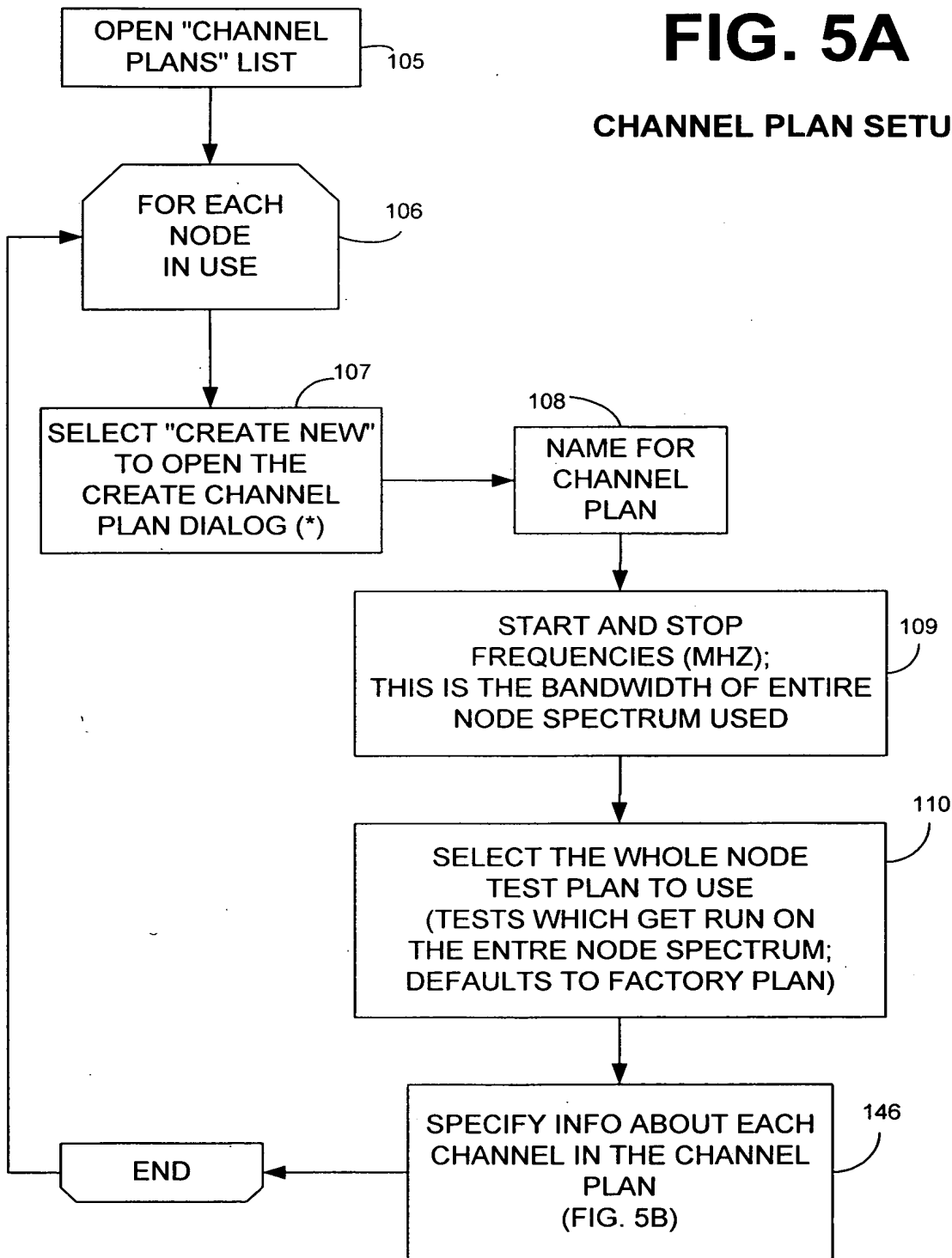


FIG. 4

FIG. 5A

CHANNEL PLAN SETUP



SPECIFY GENERAL INFO ABOUT CHANNEL PLAN

FIG. 5A

FIG. 5B

CHANNEL PLAN SETUP (CONTINUED)

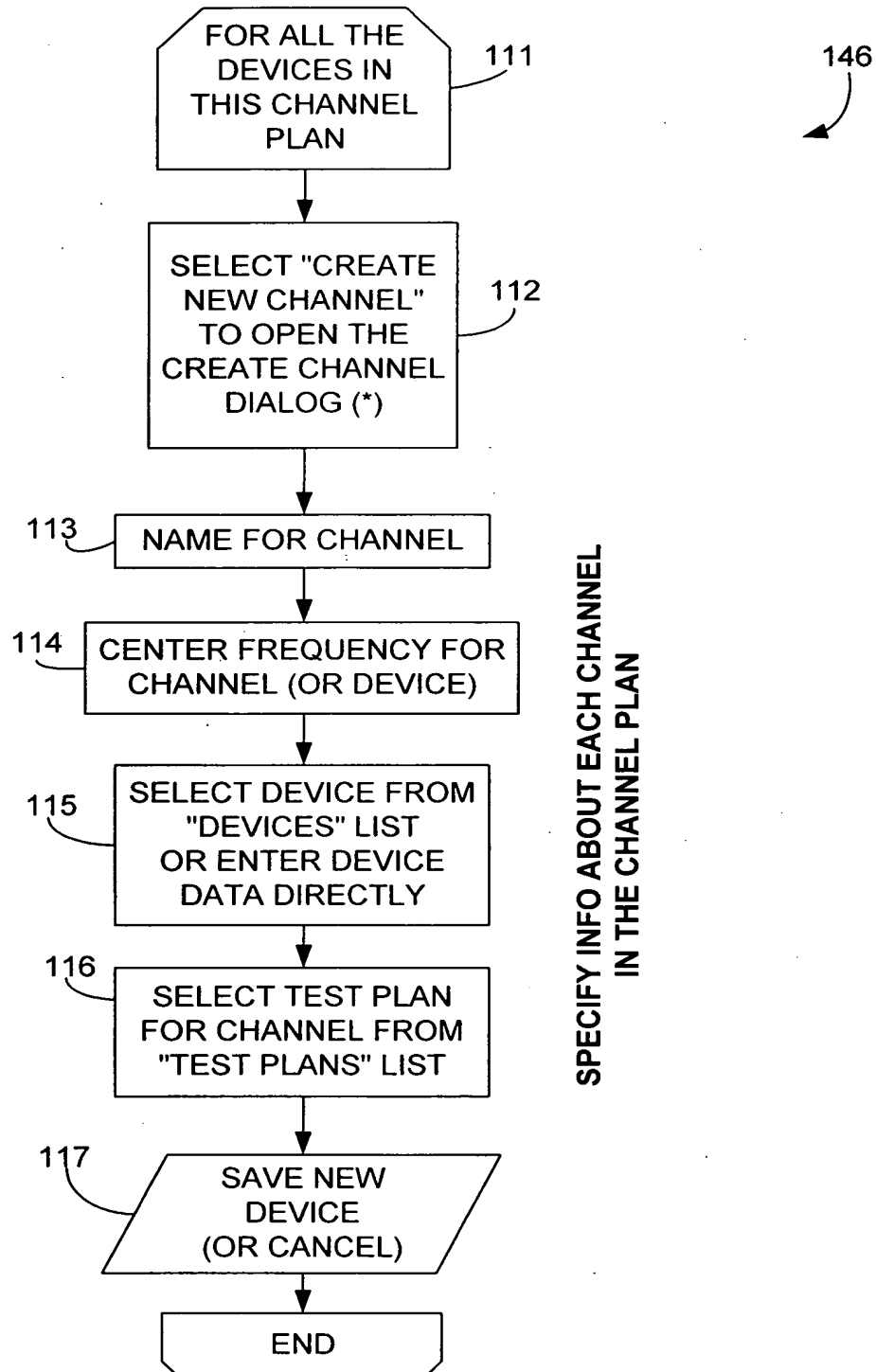
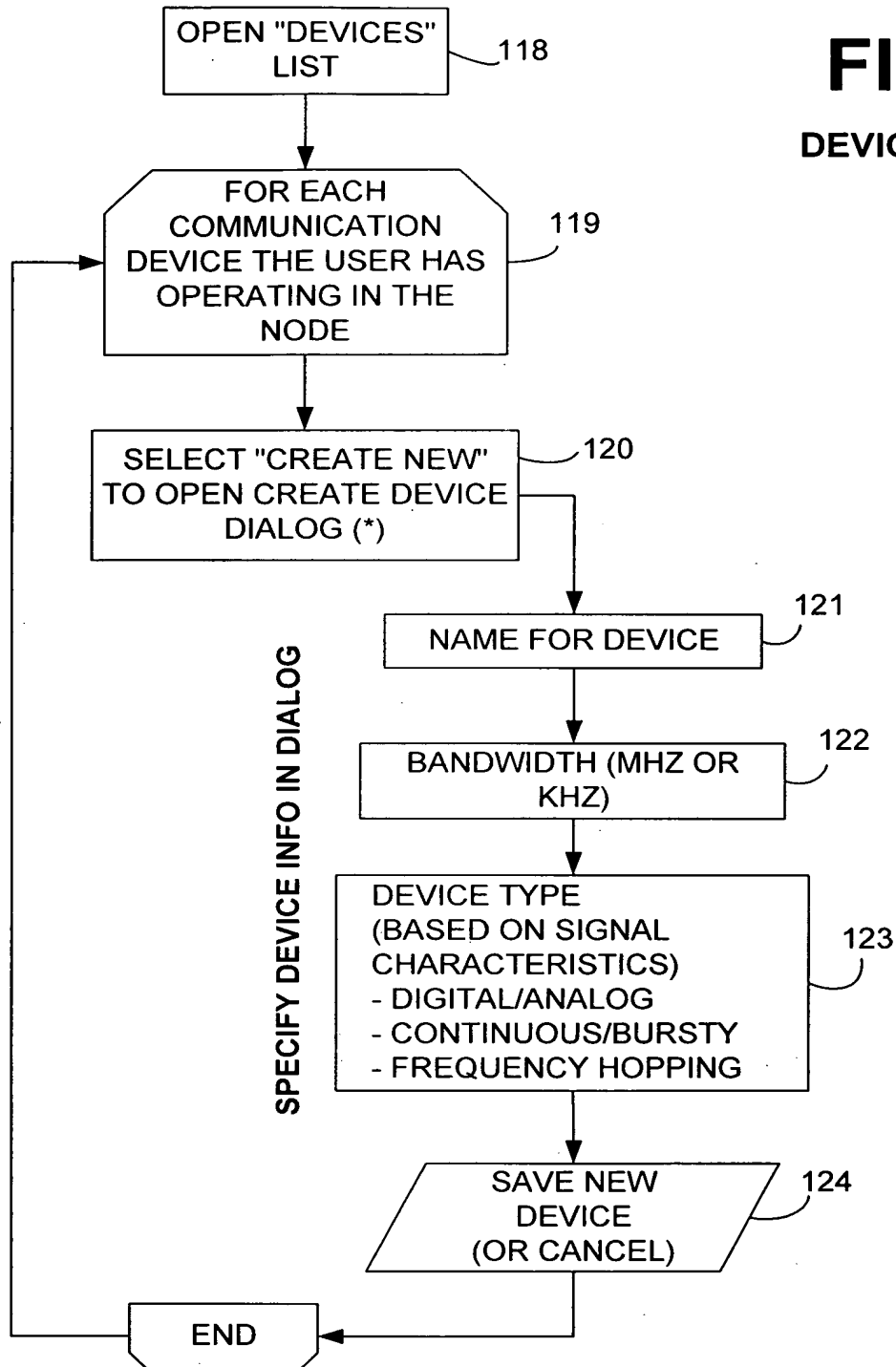


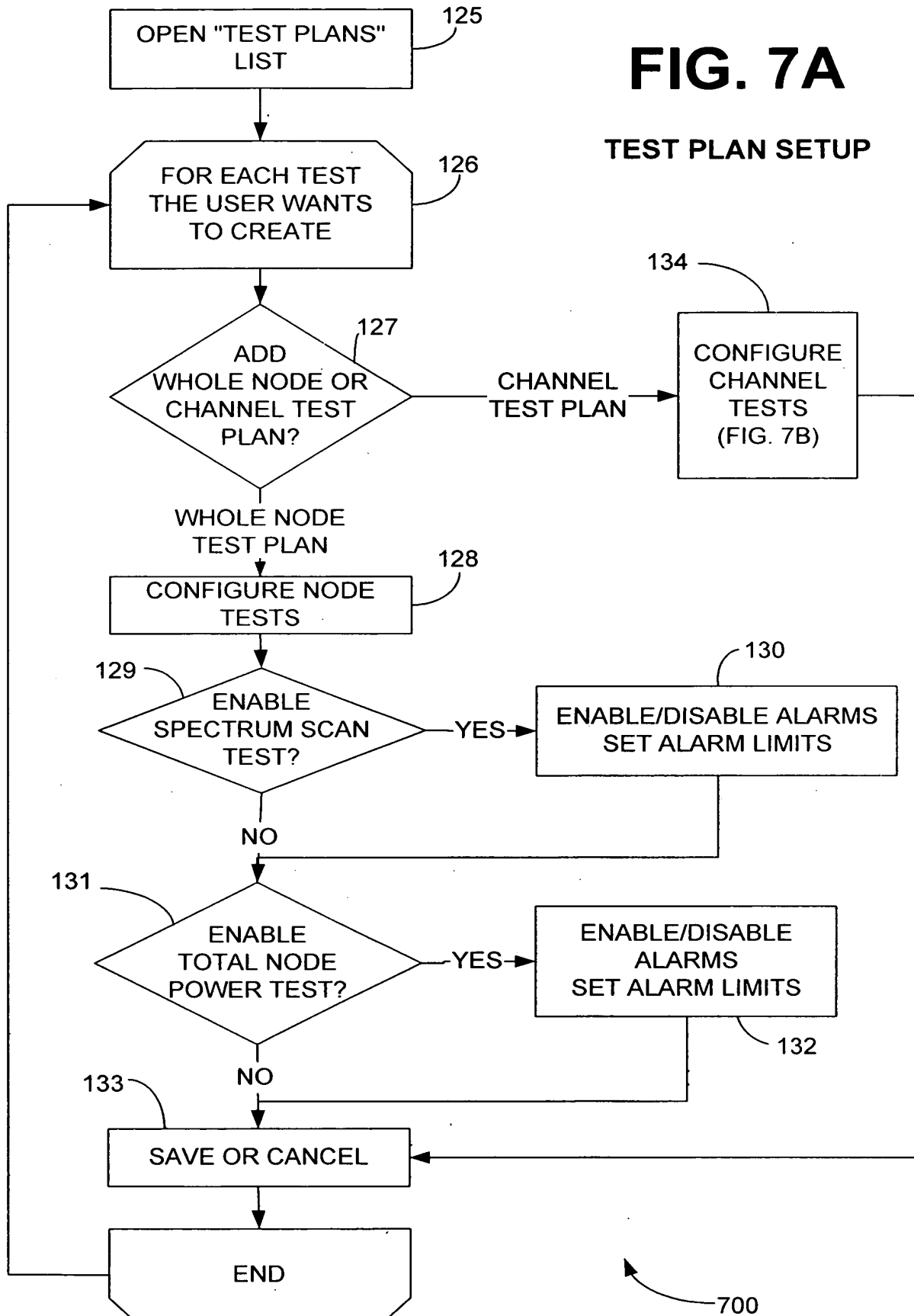
FIG. 6
DEVICE SETUP



* NOTE: DEVICE LIST DIALOG ALSO
ALLOWS USER TO EDIT OR DELETE
DEVICES.

FIG. 7A

TEST PLAN SETUP



TEST PLAN SETUP (CONTINUED)

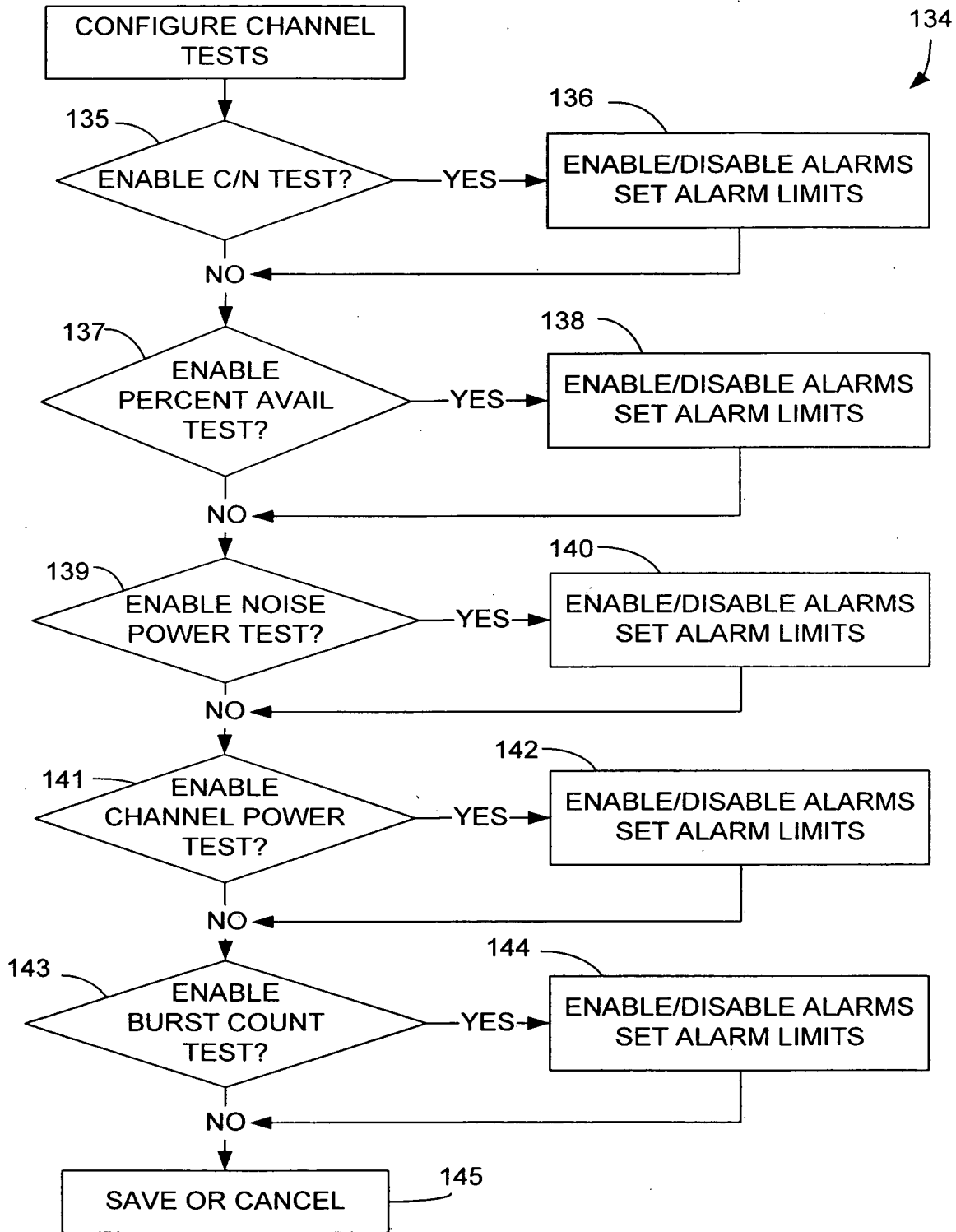
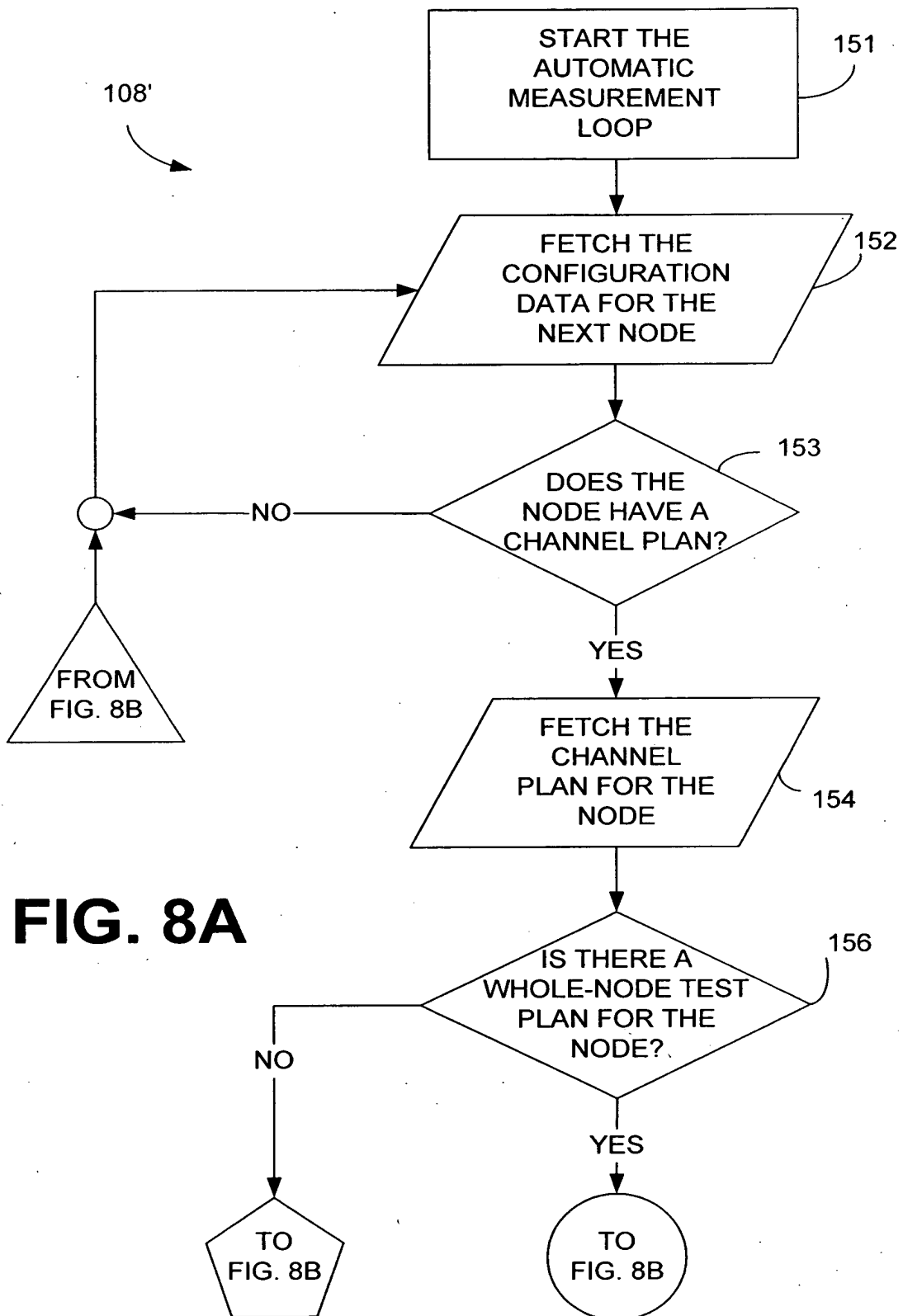


FIG. 7B

**AUTOMATIC MODE
(FIRST EMBODIMENT; EMPLOYS ROUND ROBIN ALGORITHM)**



**AUTOMATIC MODE
(FIRST EMBODIMENT -
CONTINUED)**

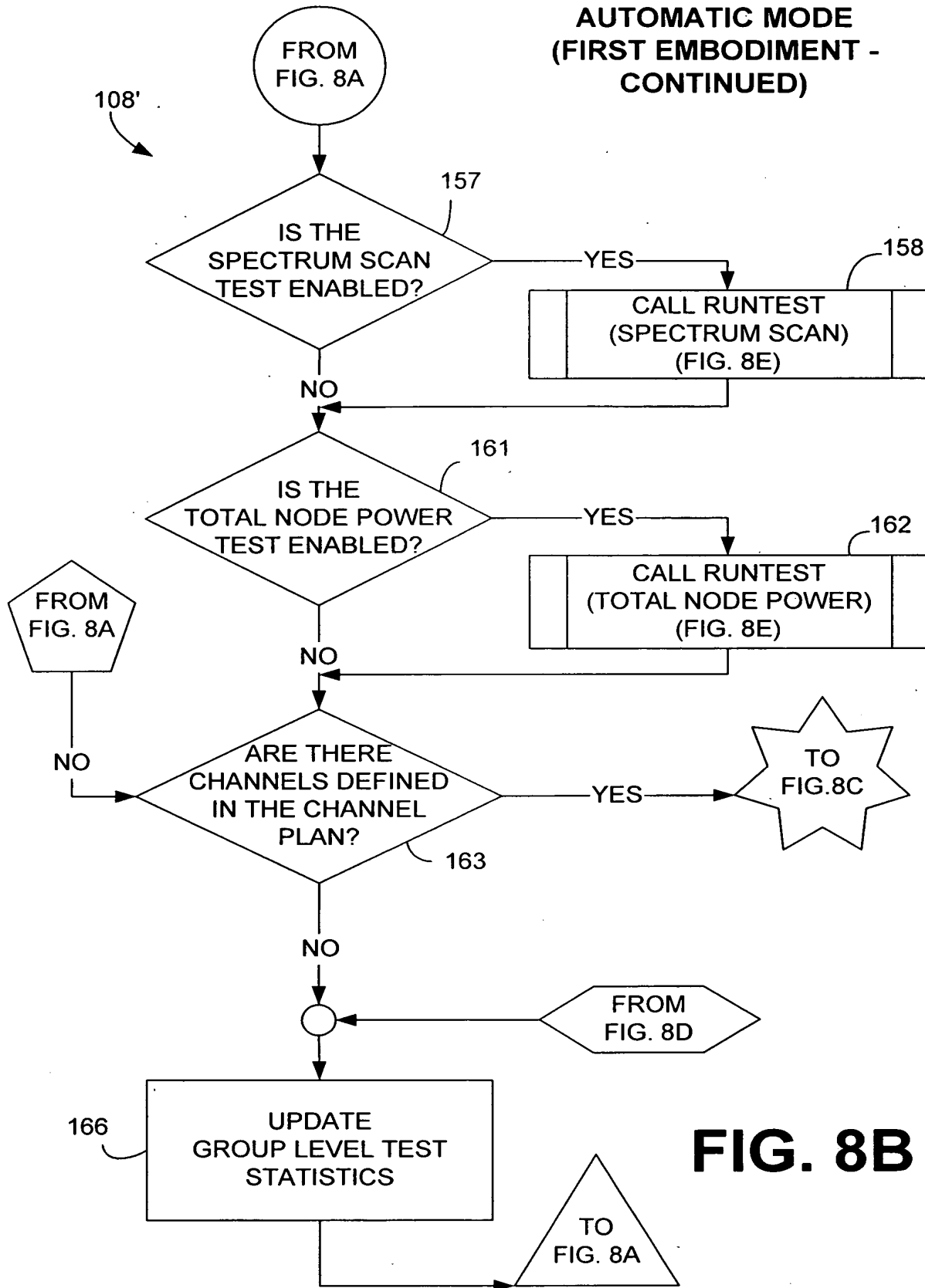


FIG. 8B

**AUTOMATIC MODE
(FIRST EMBODIMENT - CONTINUED)**

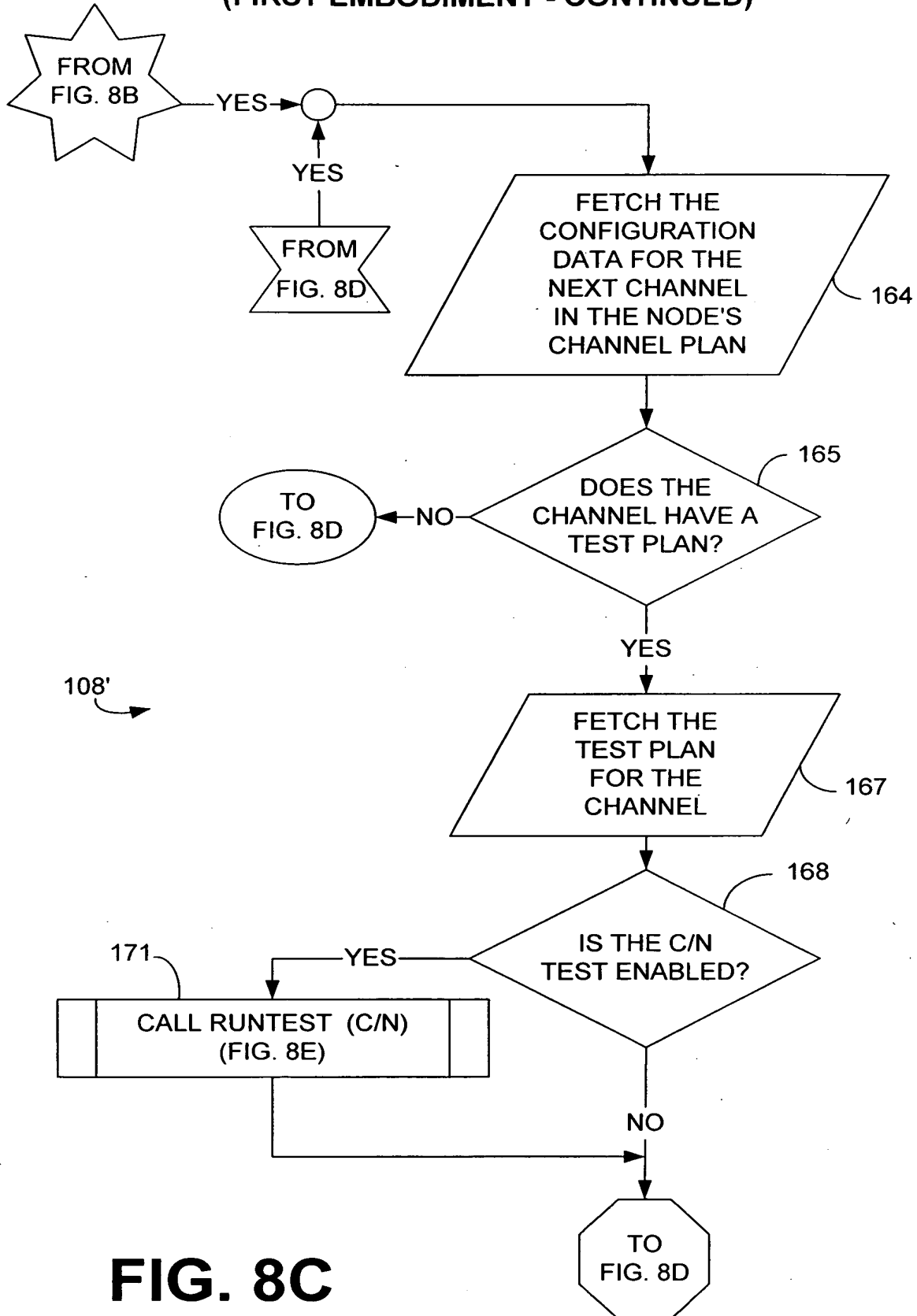
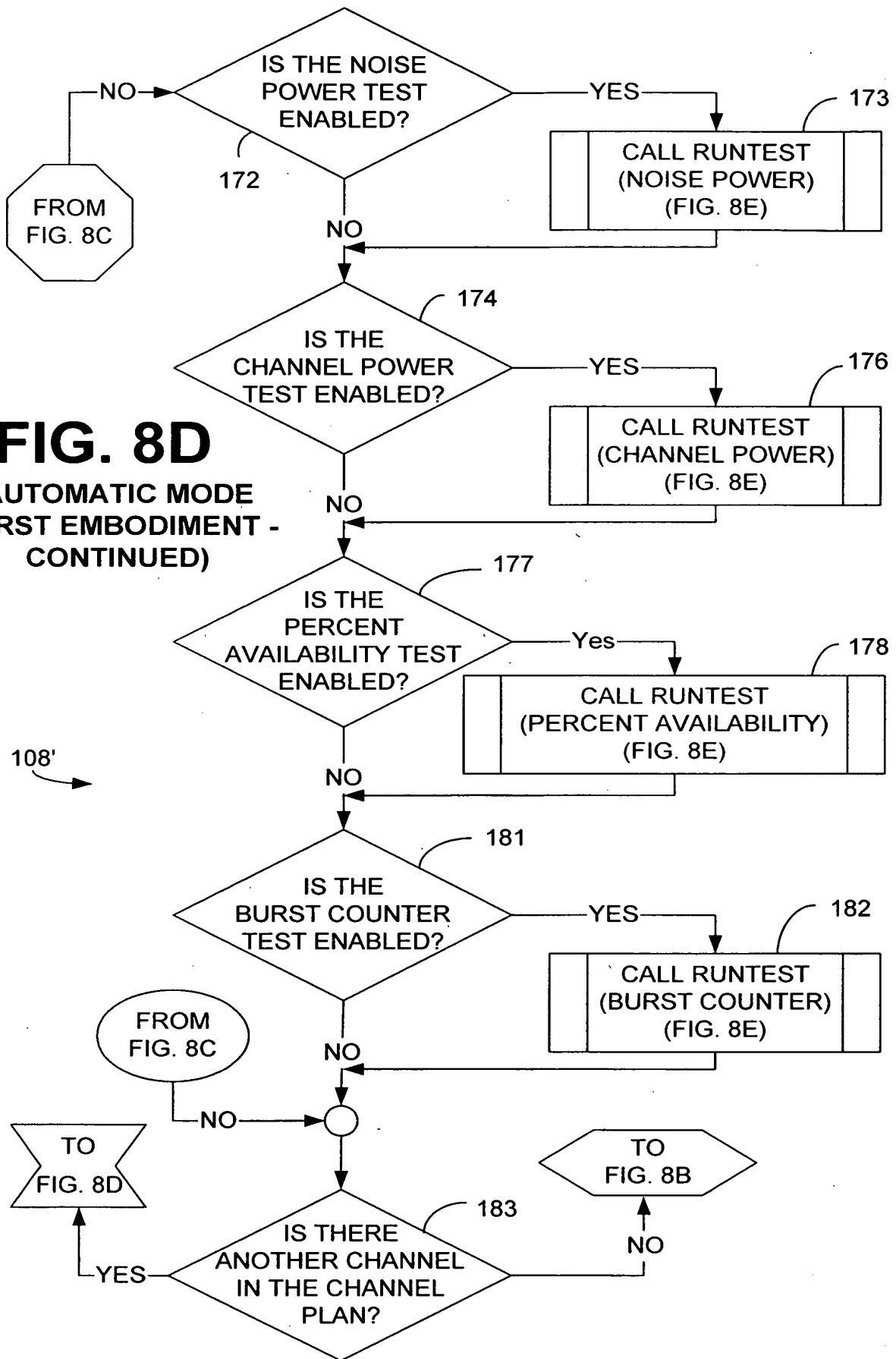


FIG. 8D
AUTOMATIC MODE
(FIRST EMBODIMENT -
CONTINUED)



**AUTOMATIC MODE
(FIRST EMBODIMENT - CONTINUED)**

RUNTEST SUBROUTINE

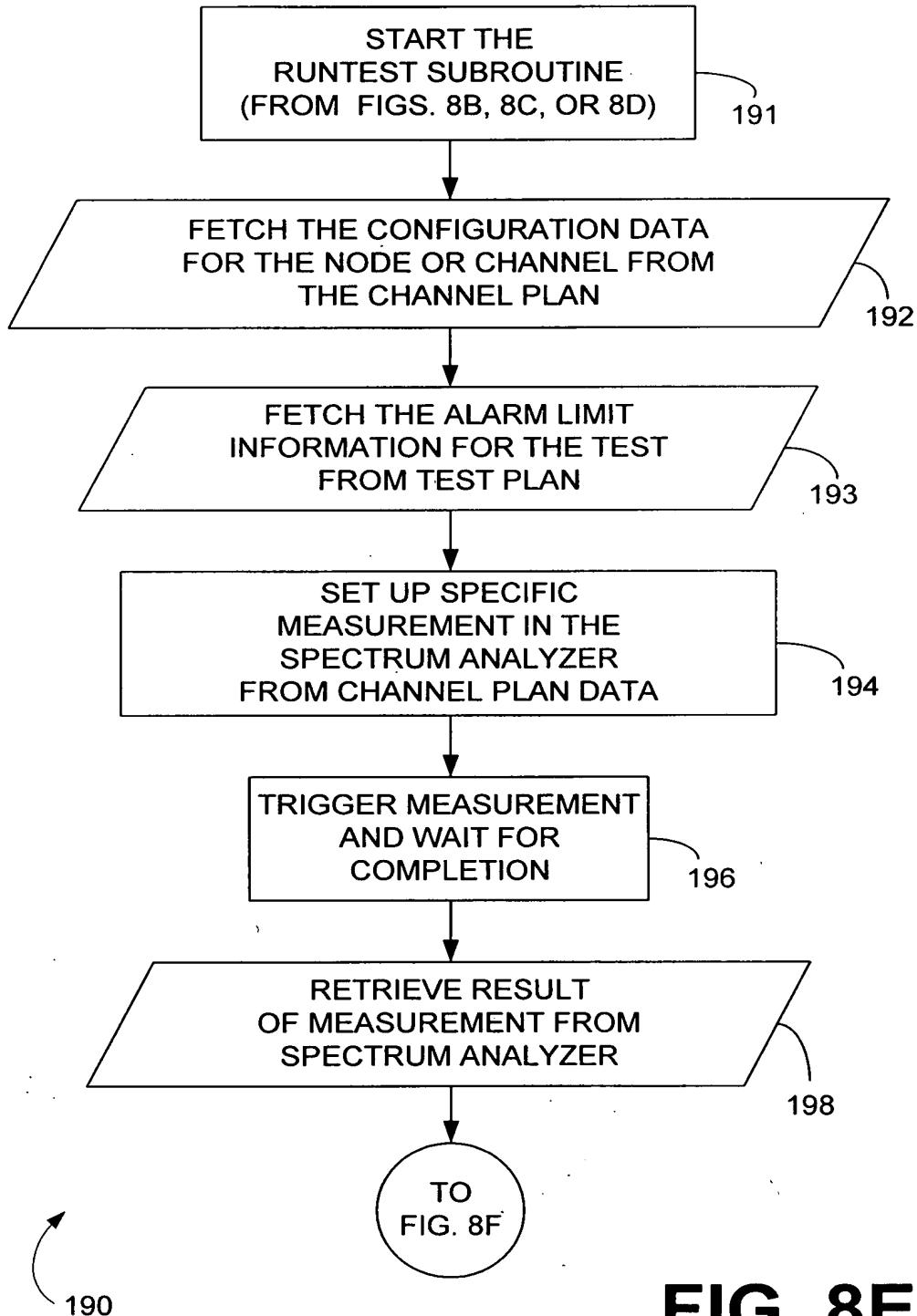


FIG. 8E

**AUTOMATIC MODE
(FIRST EMBODIMENT - CONTINUED)**

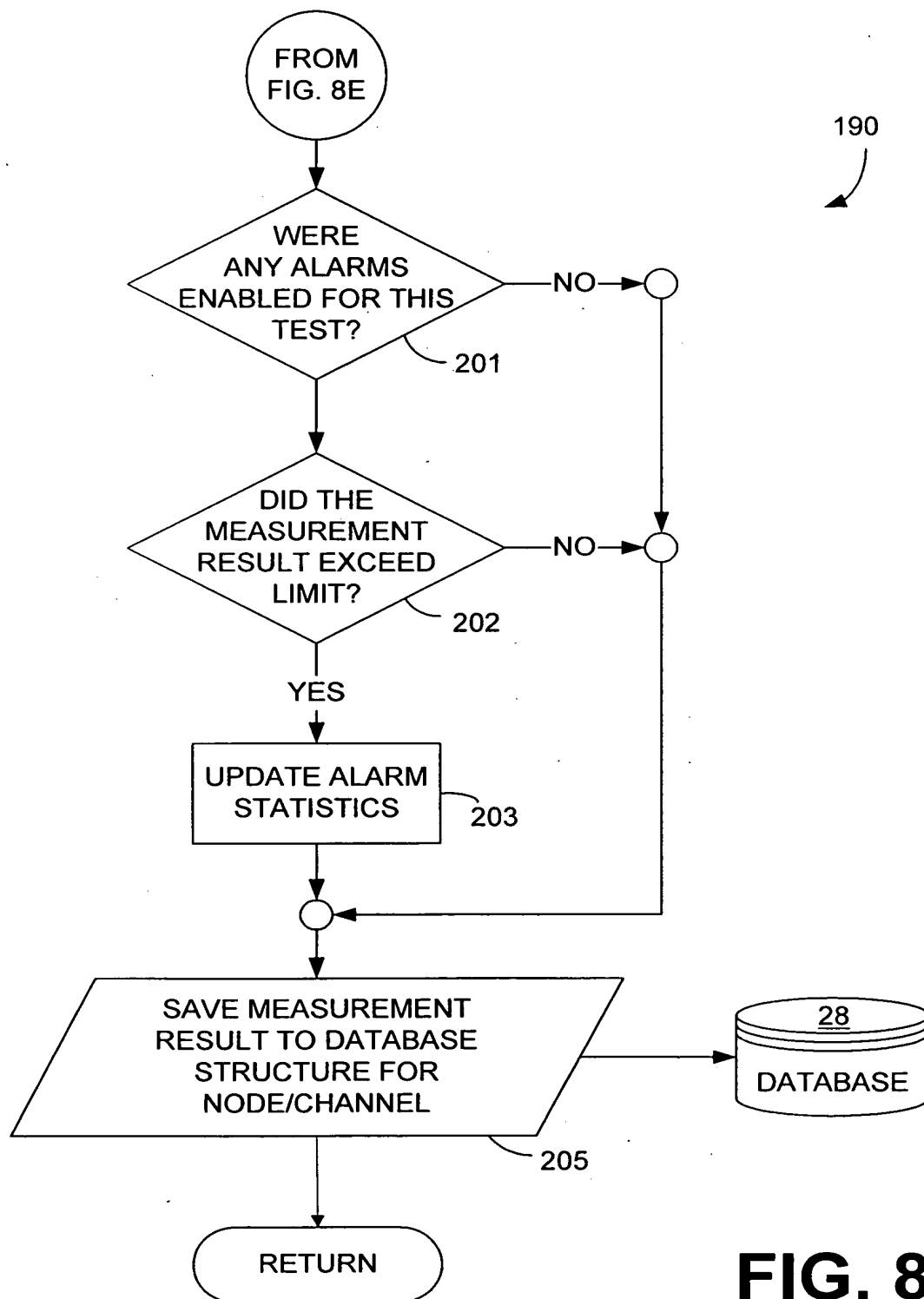


FIG. 8F

**AUTOMATIC MODE
(SECOND EMBODIMENT; EMPLOYS SMART
SCANNING ALGORITHM)**

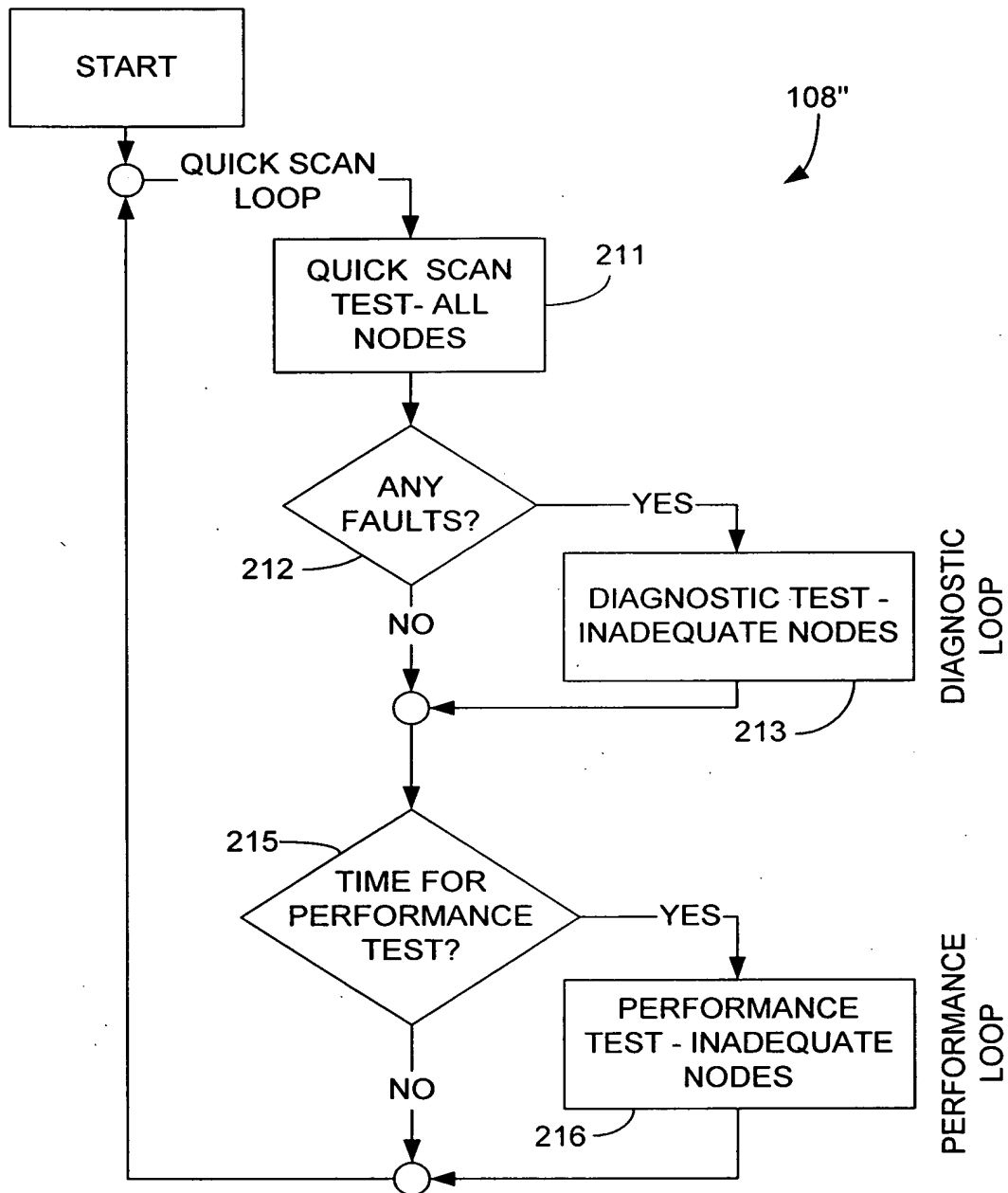
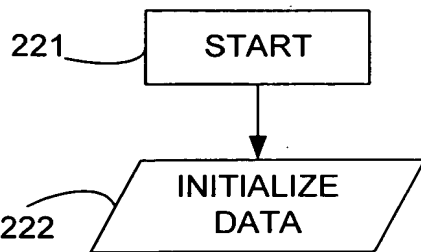


FIG. 9A



**AUTOMATIC MODE
(SECOND EMBODIMENT -
CONTINUED)**

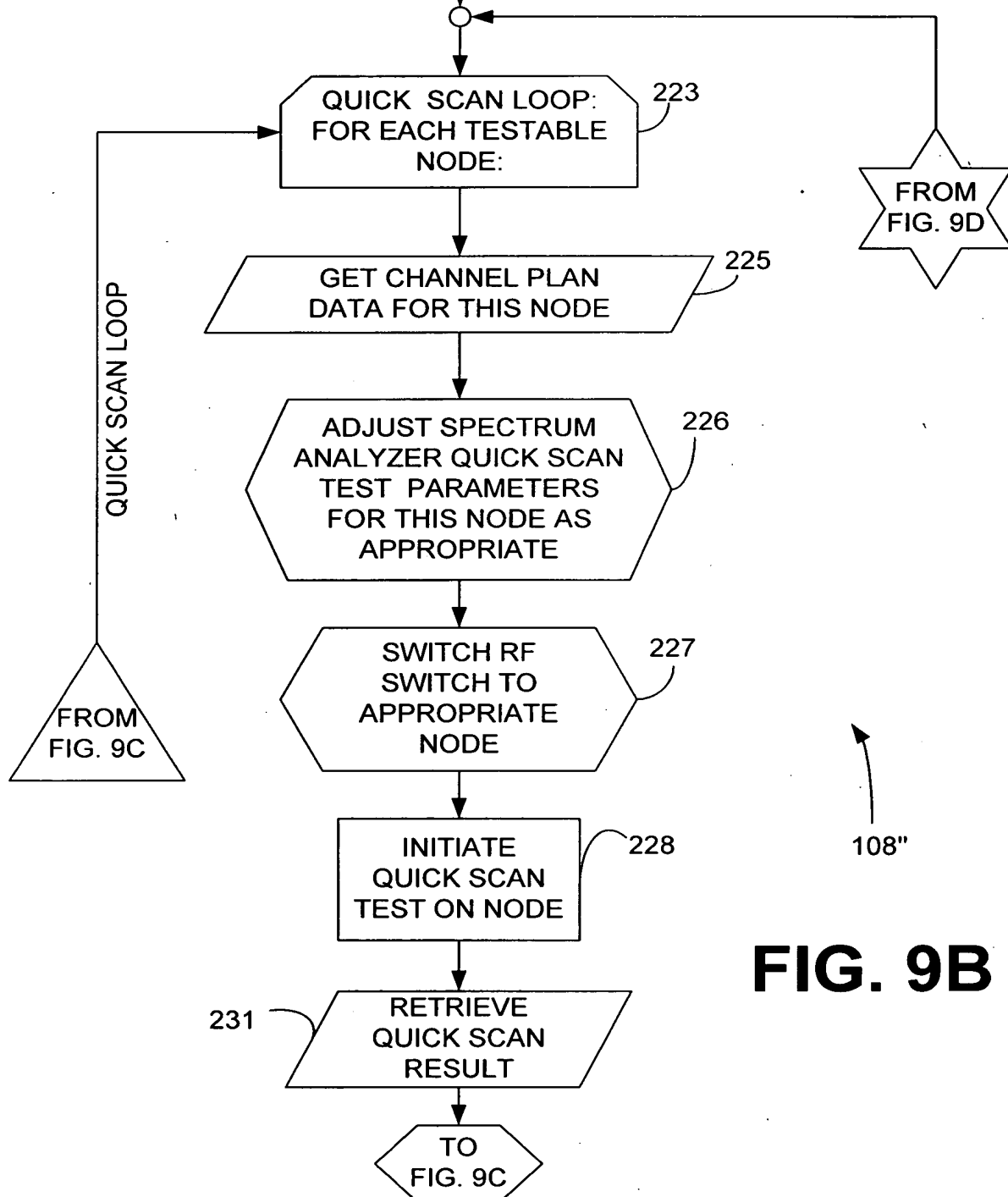


FIG. 9B

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

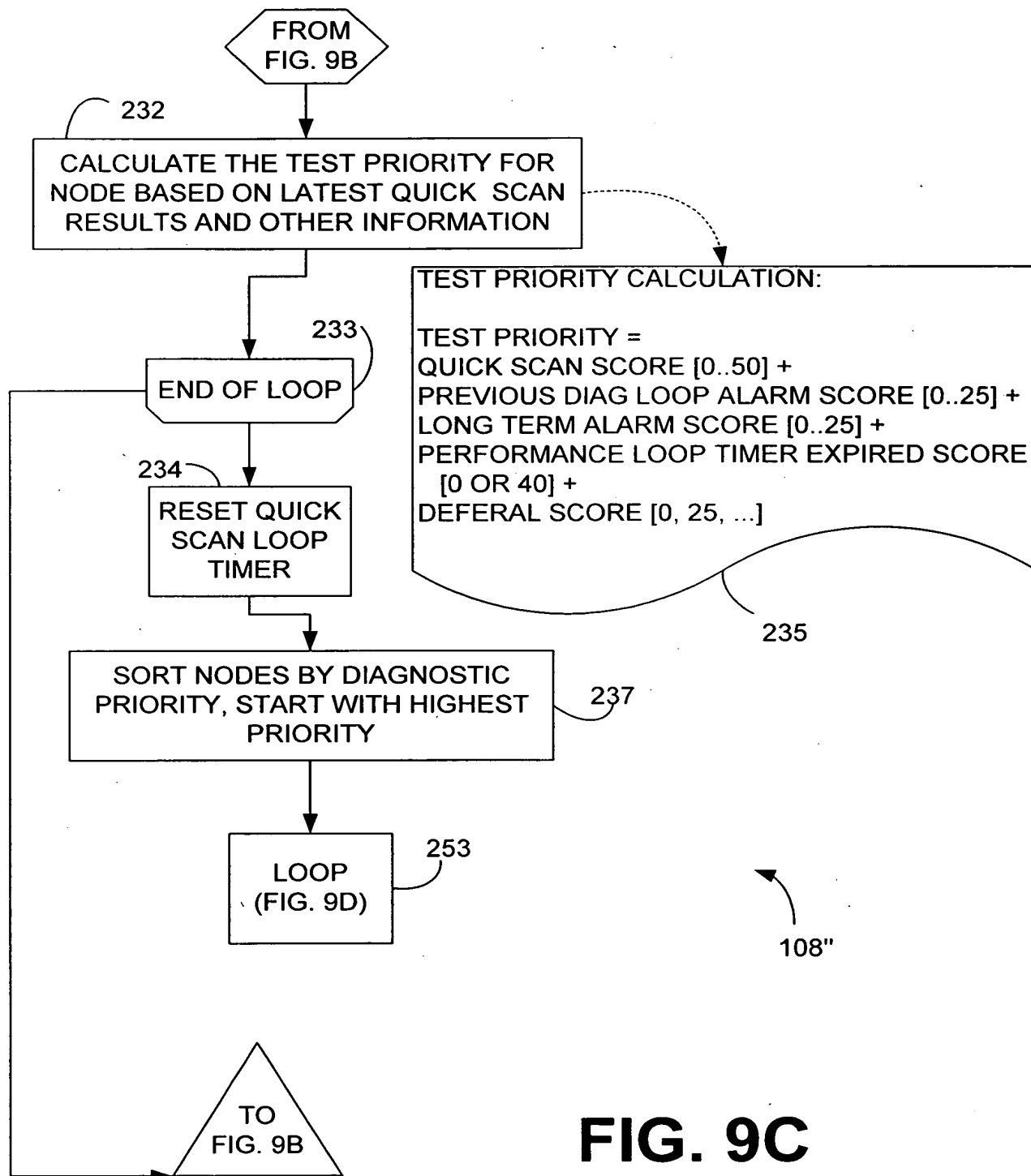
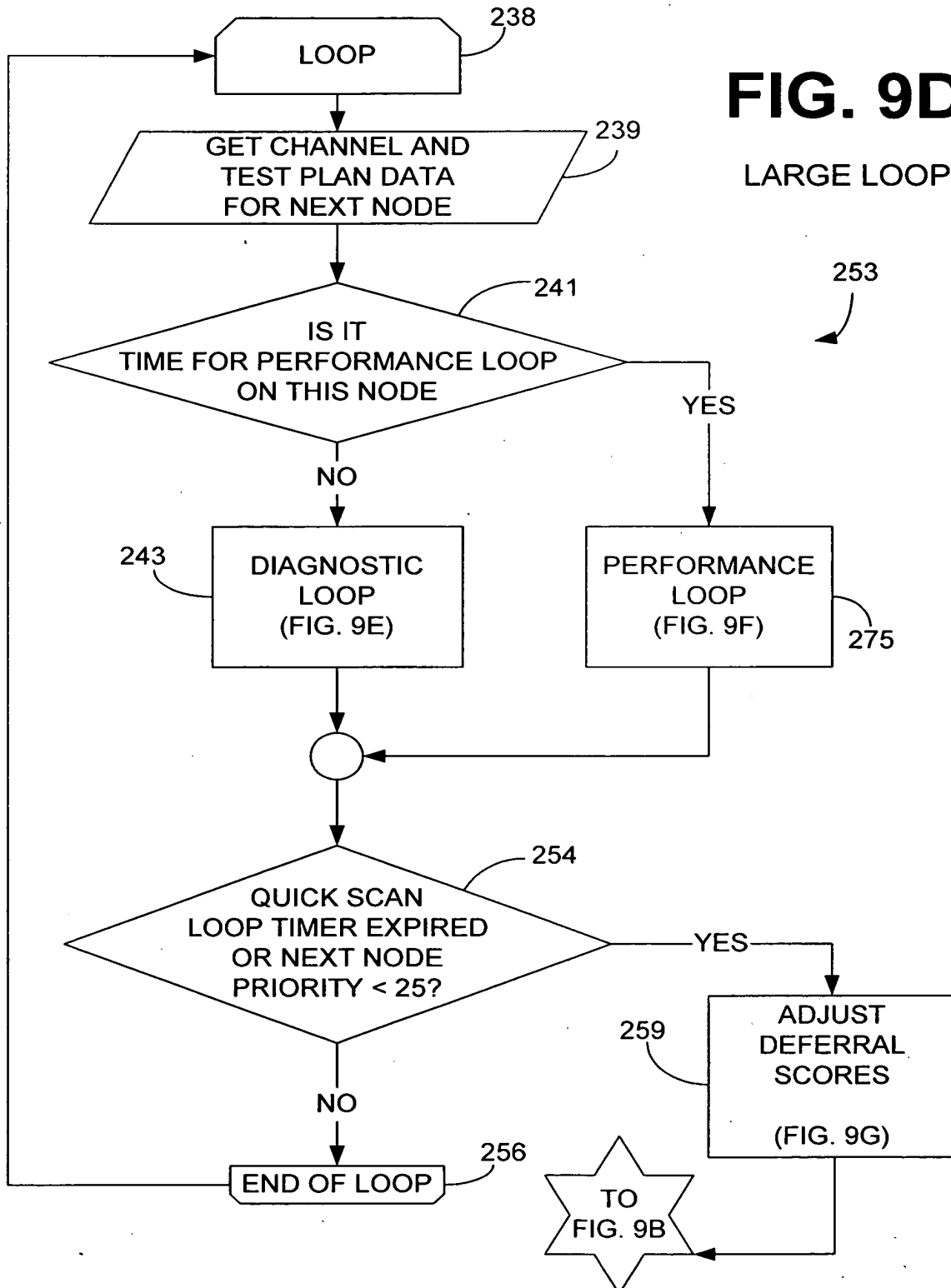


FIG. 9C

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

FIG. 9D

LARGE LOOP



**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

DIAGNOSTIC LOOP

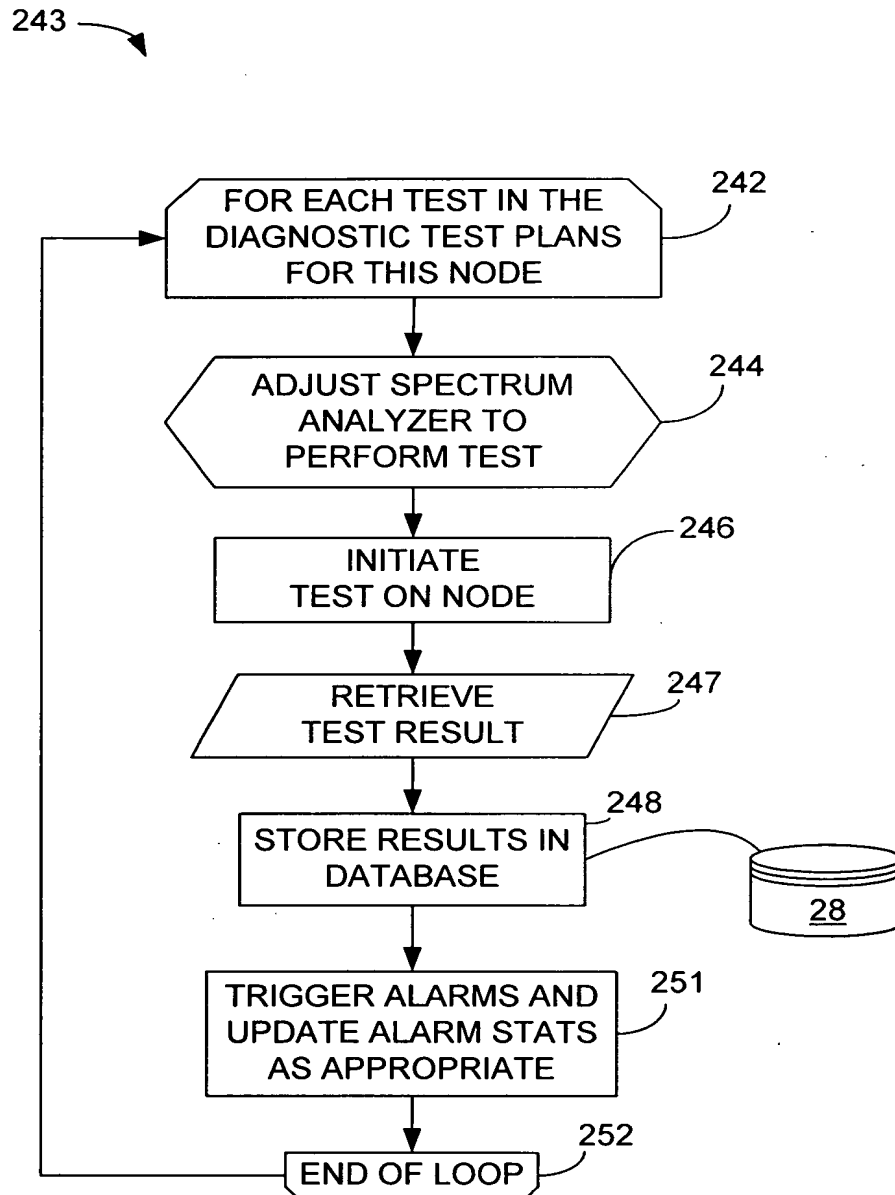


FIG. 9E

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

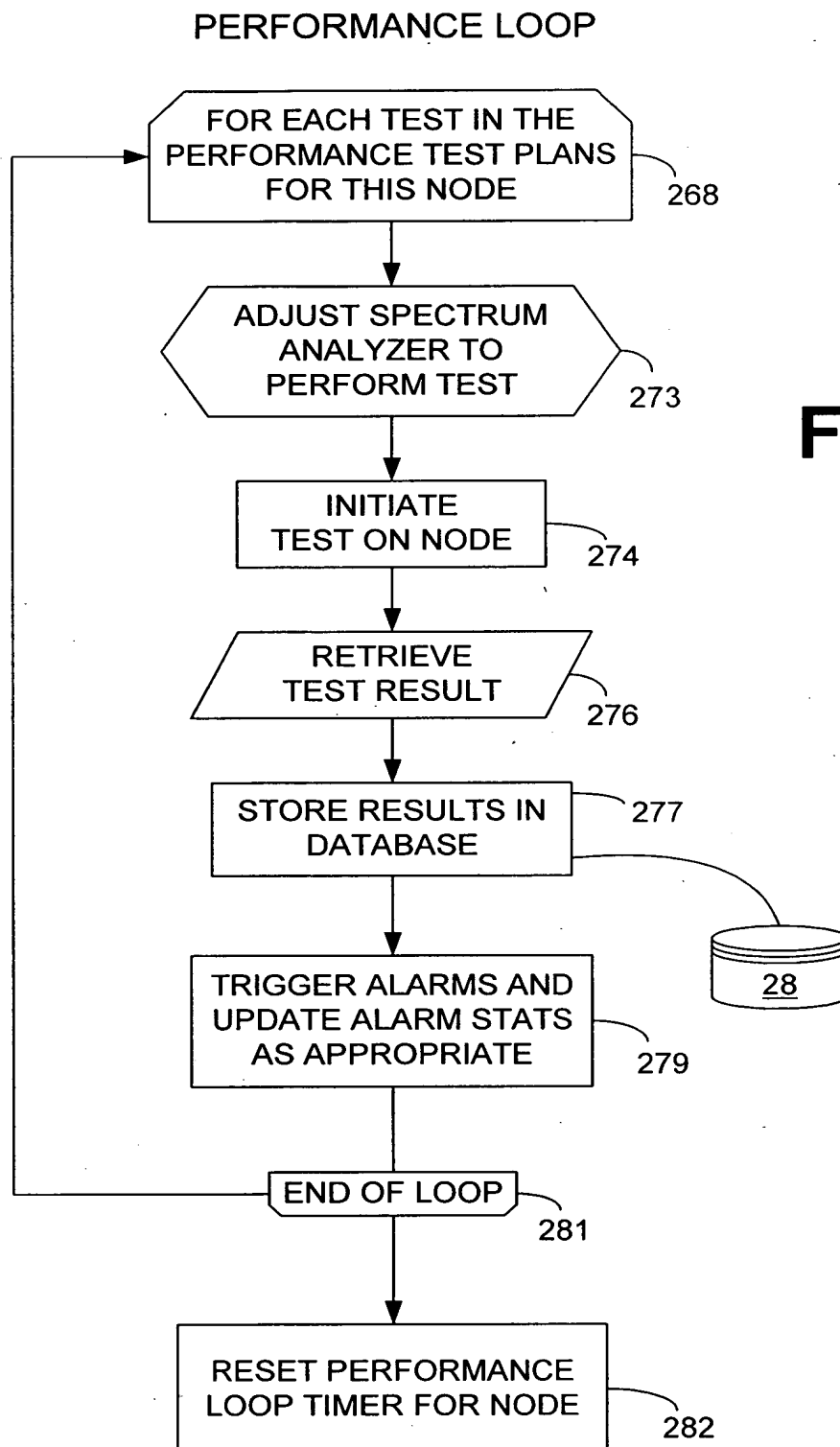


FIG. 9F

275
↓

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

ADJUST DEFERRAL SCORES LOOP

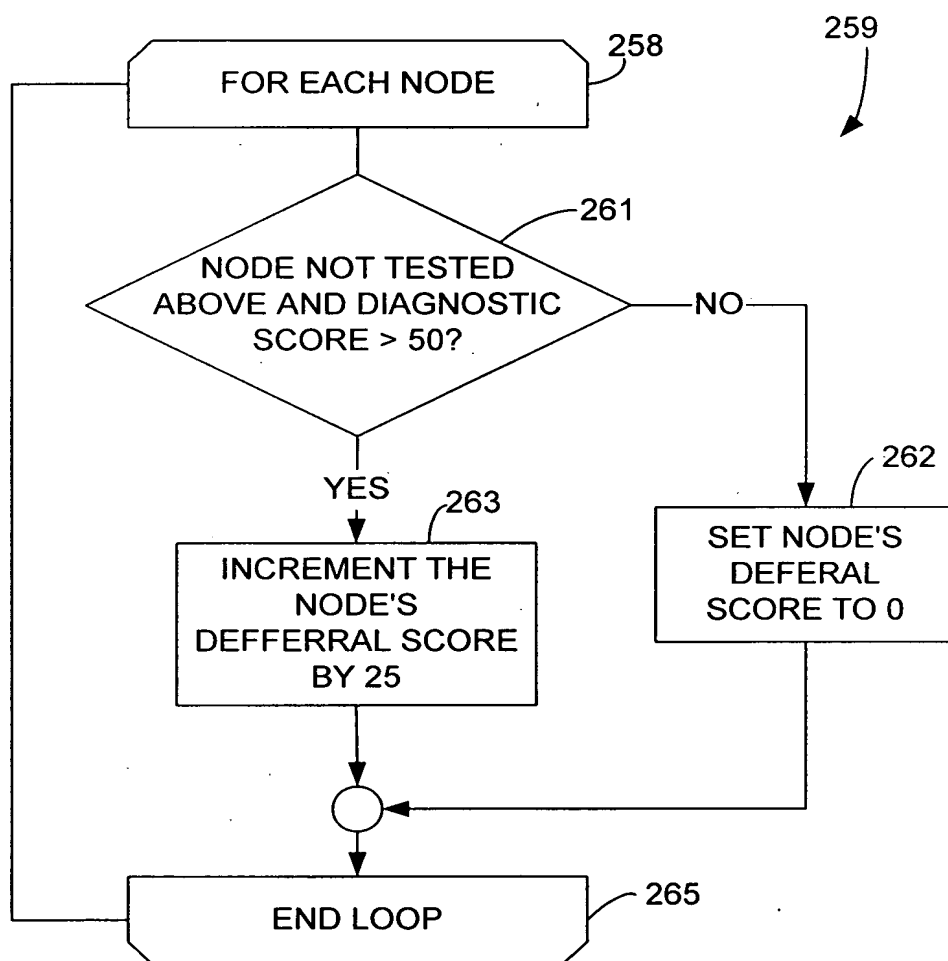
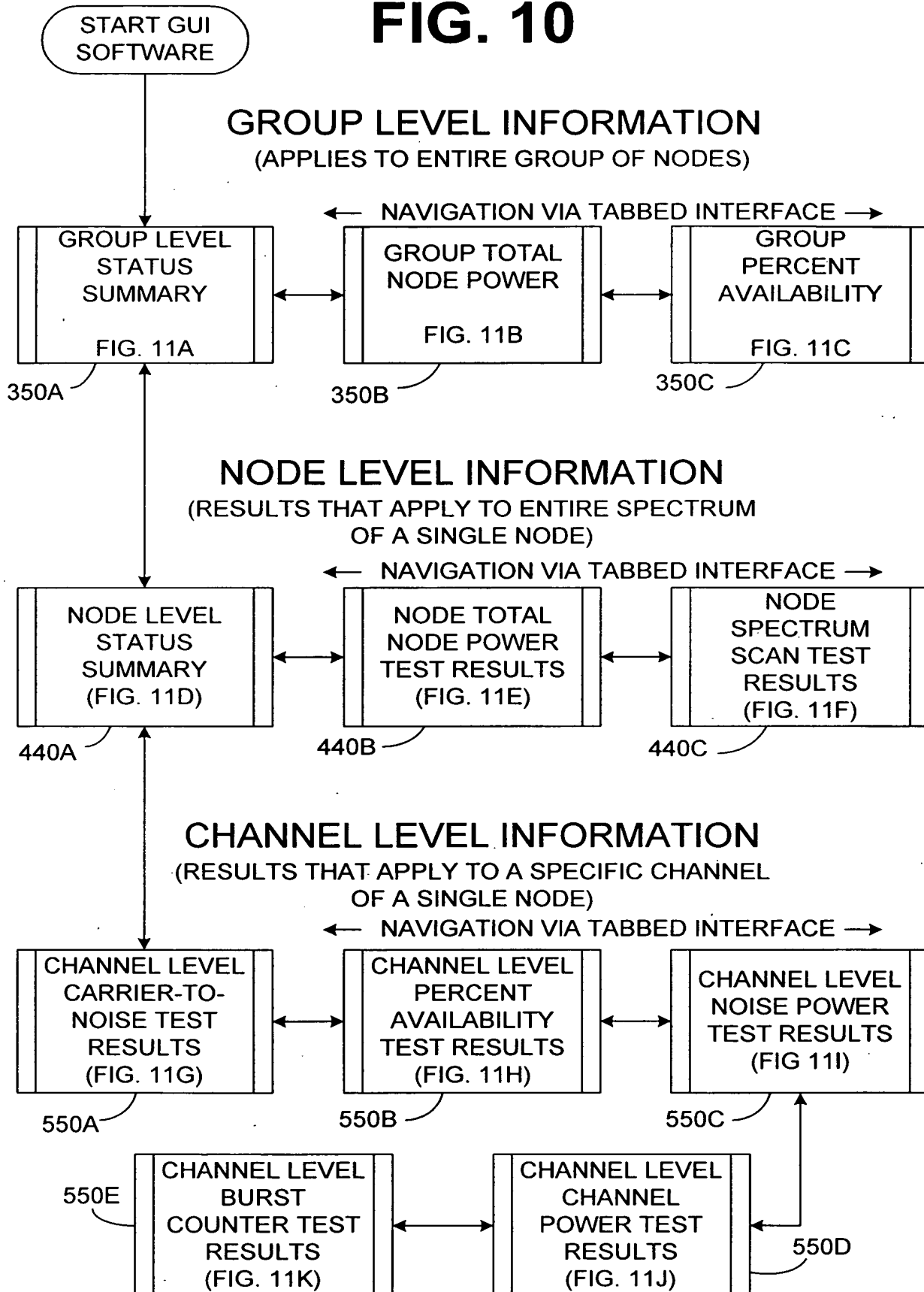


FIG. 9G

FIG. 10



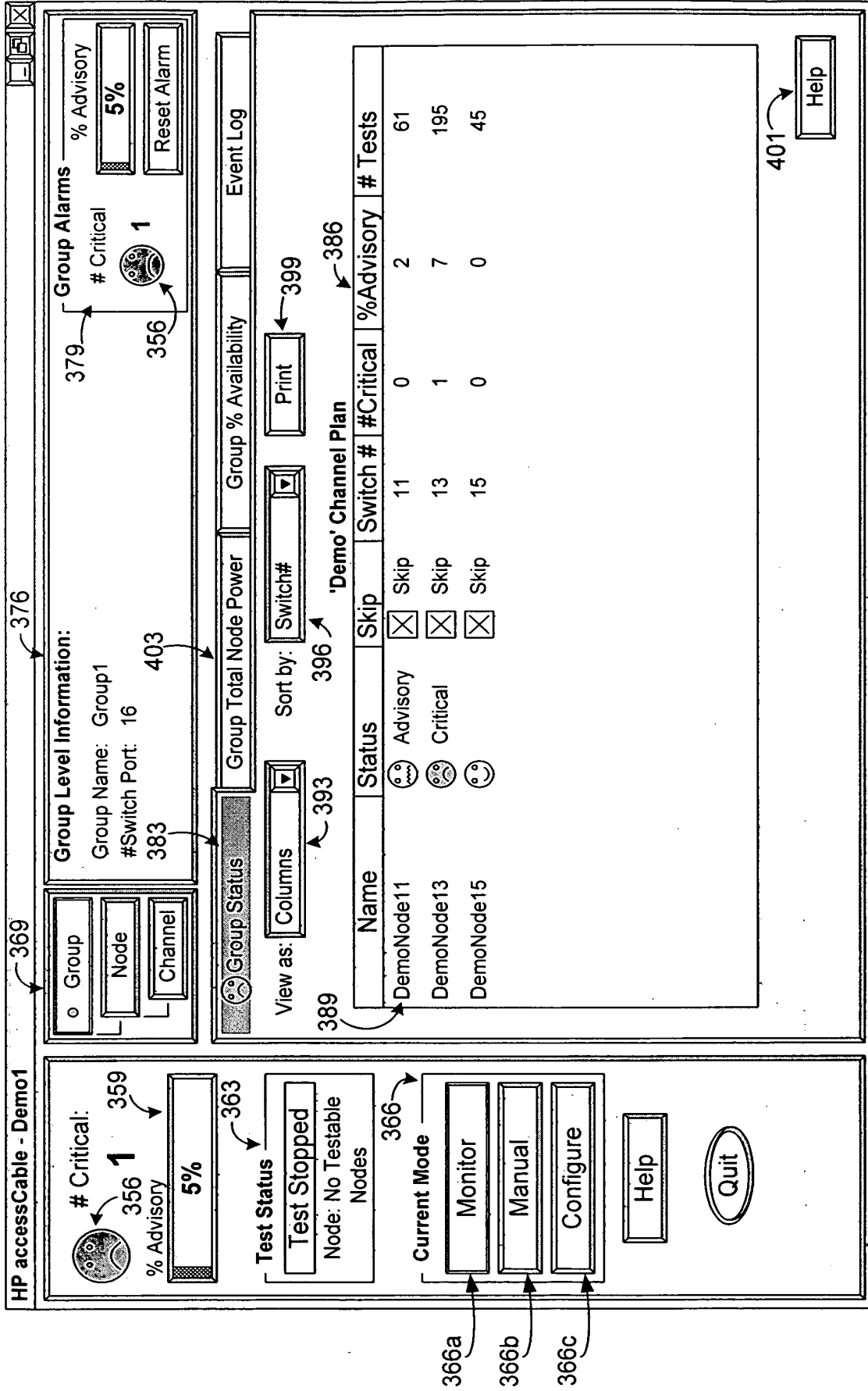


FIG. 11A

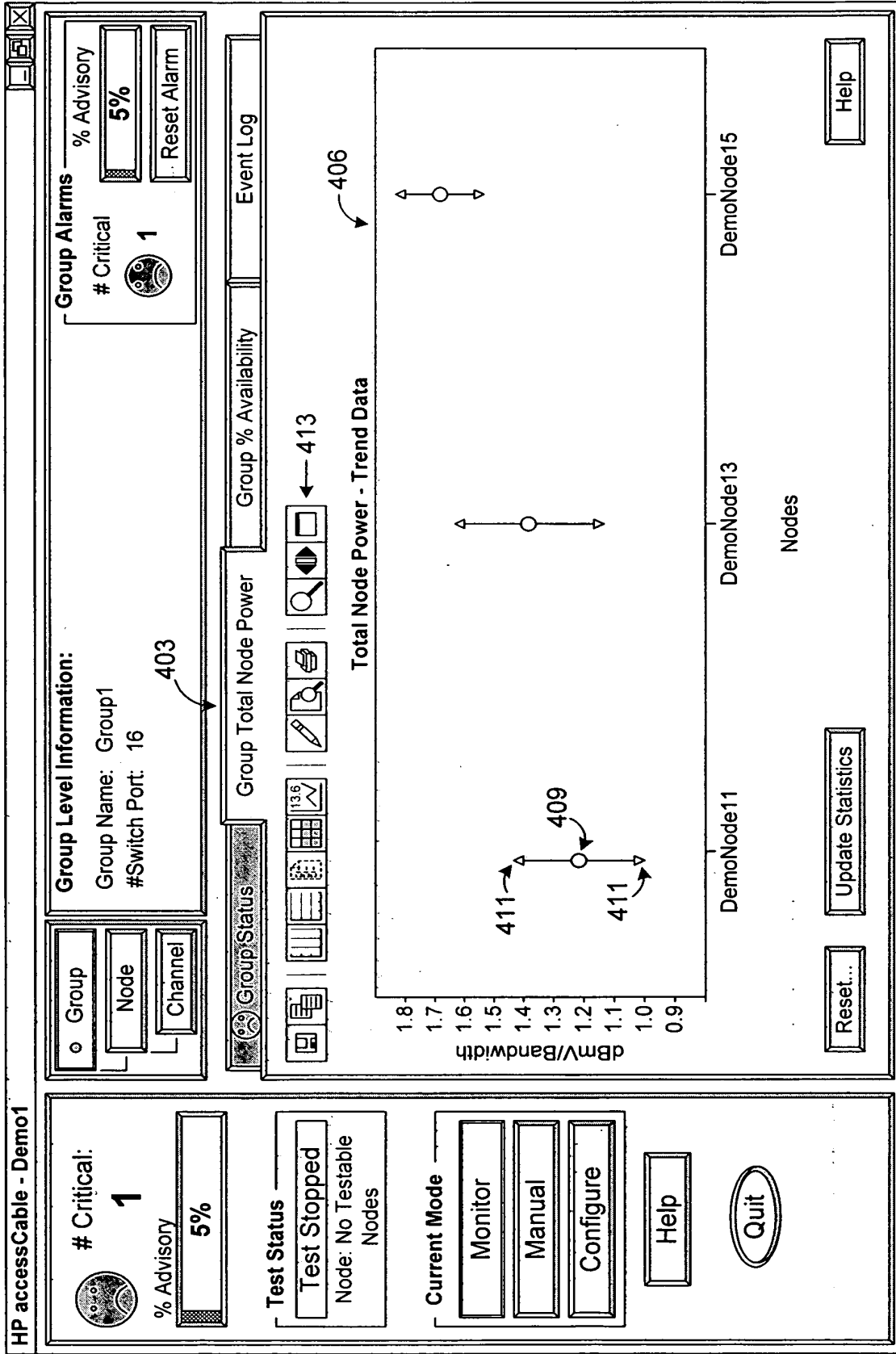


FIG. 11B

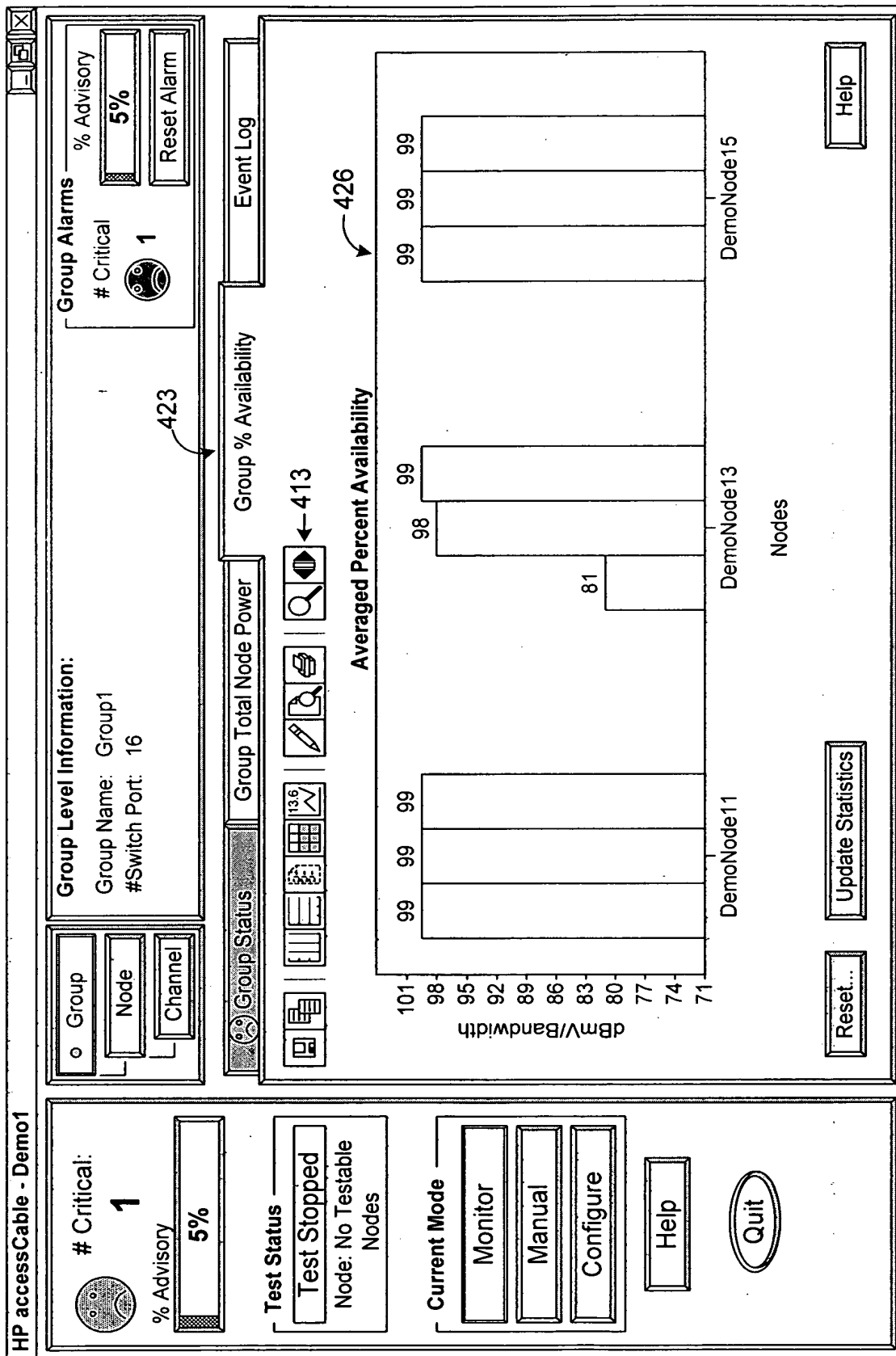


FIG. 11C

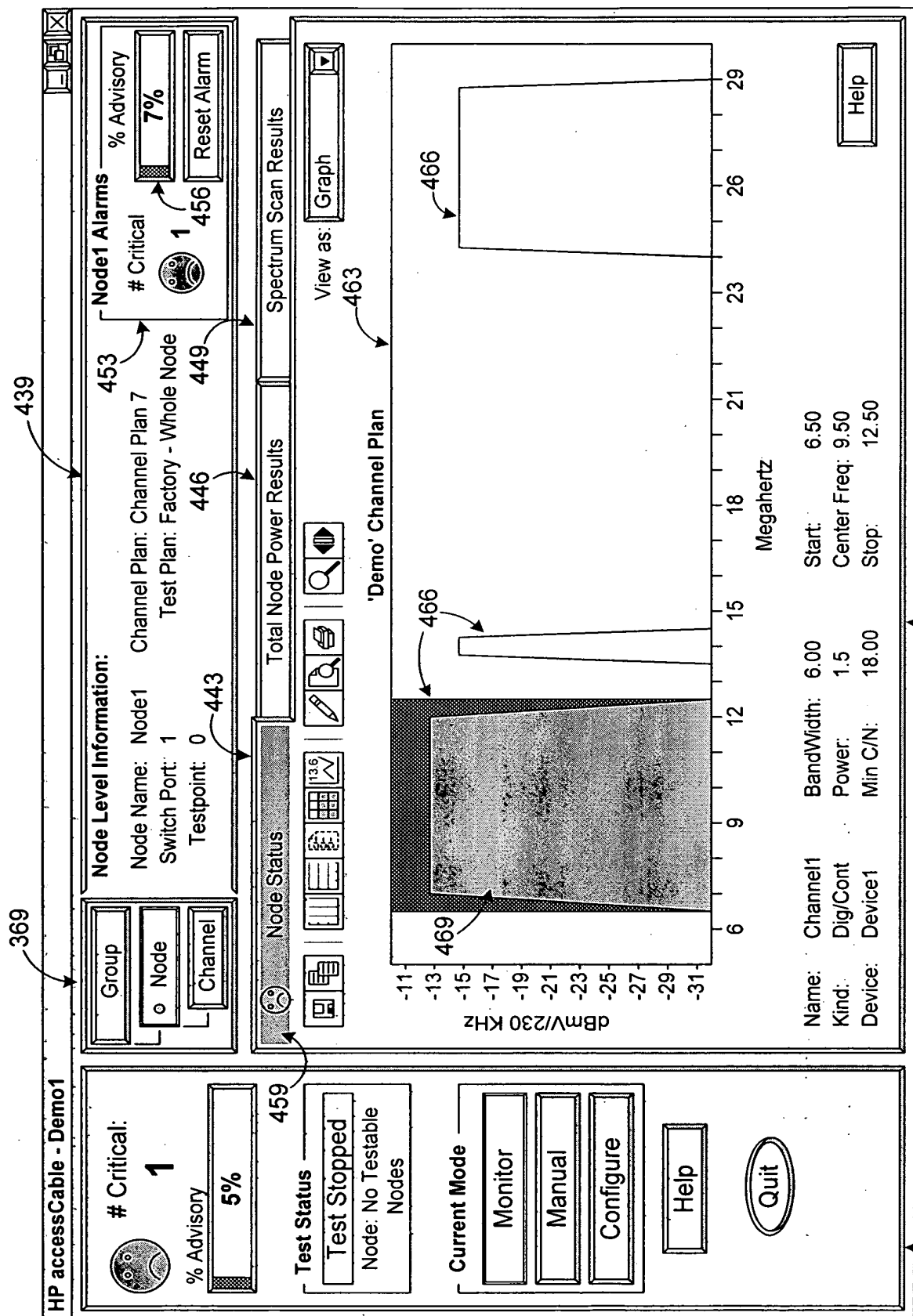


FIG. 11D

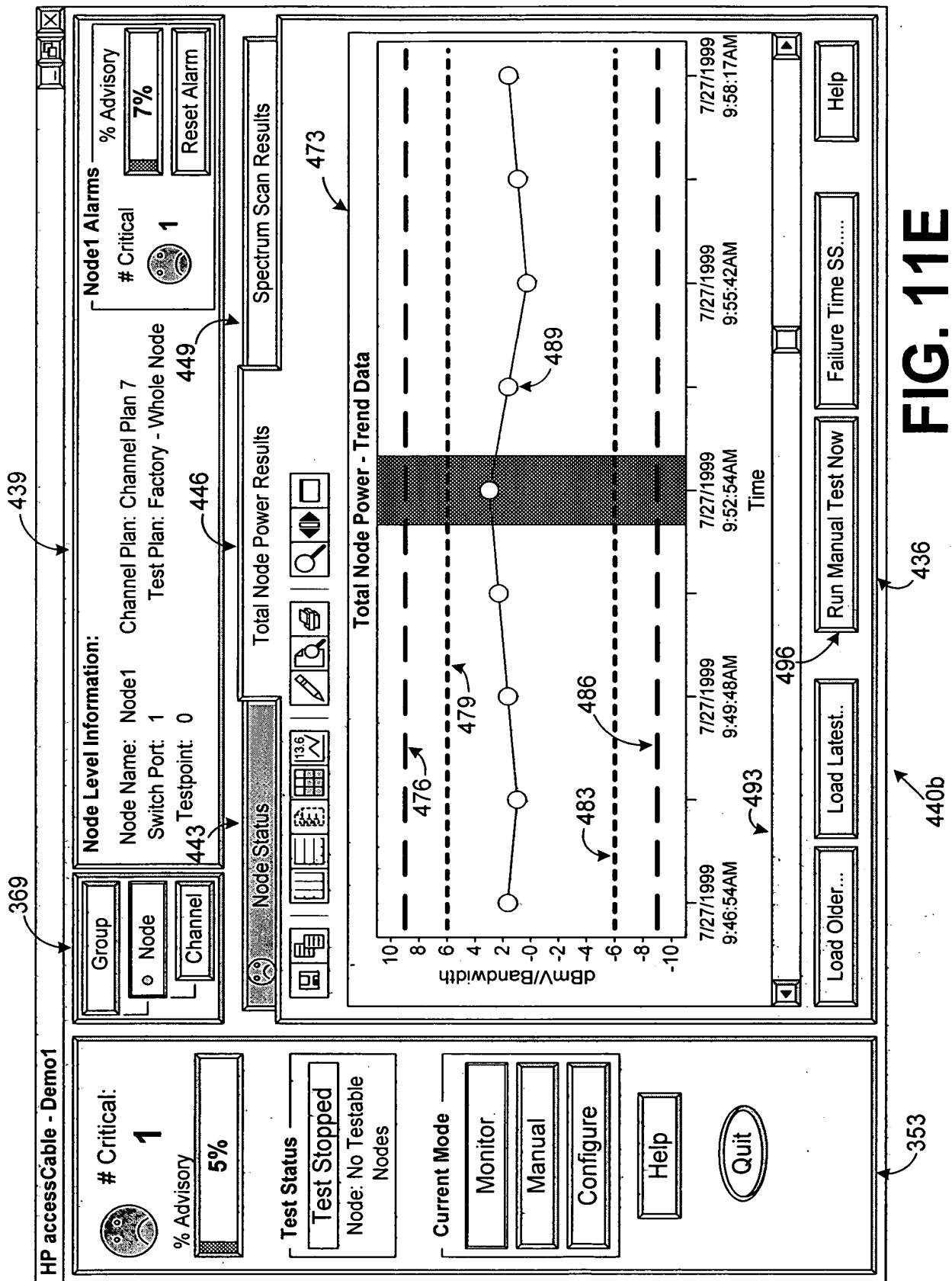


FIG. 11E

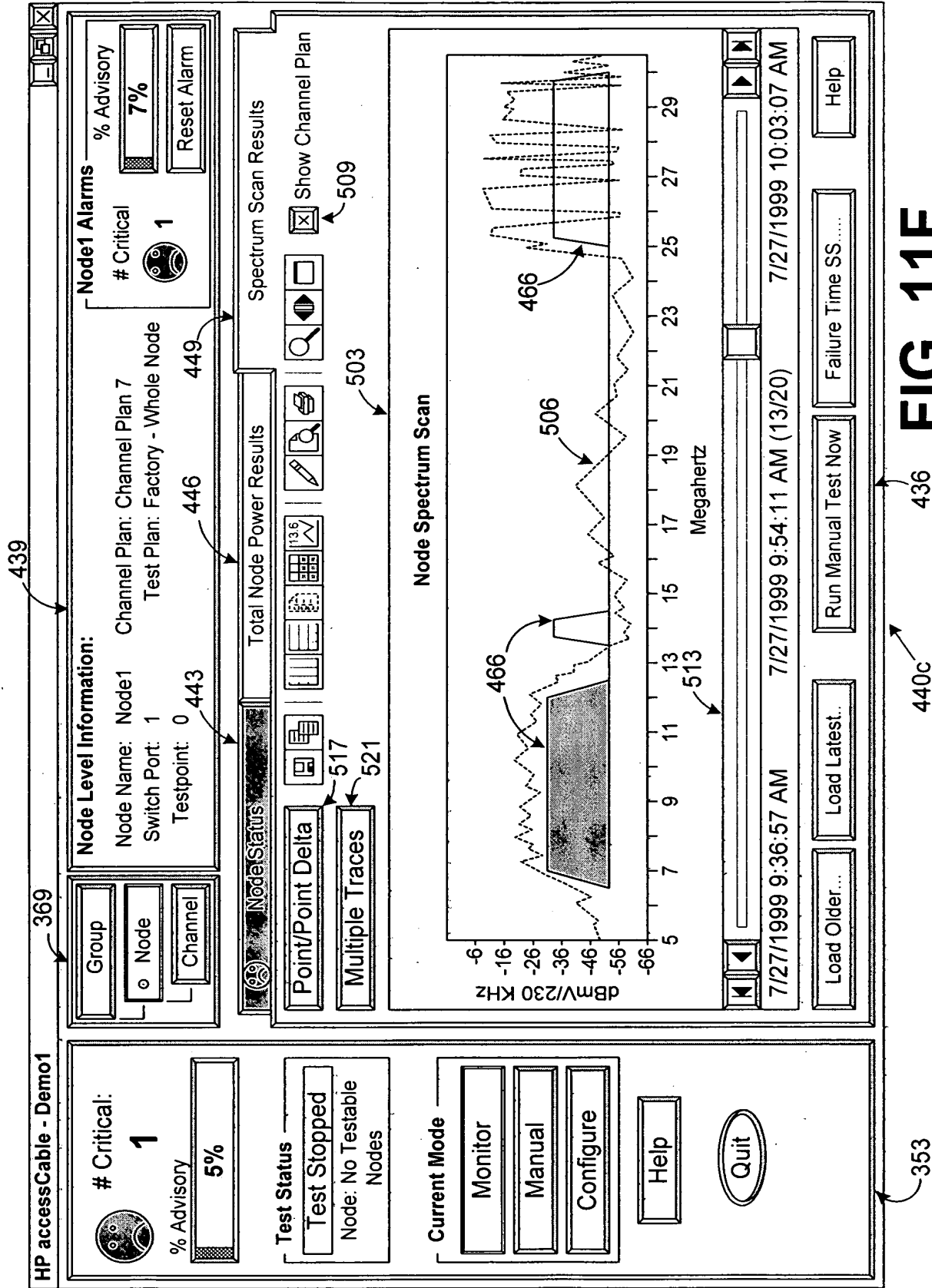


FIG. 11F

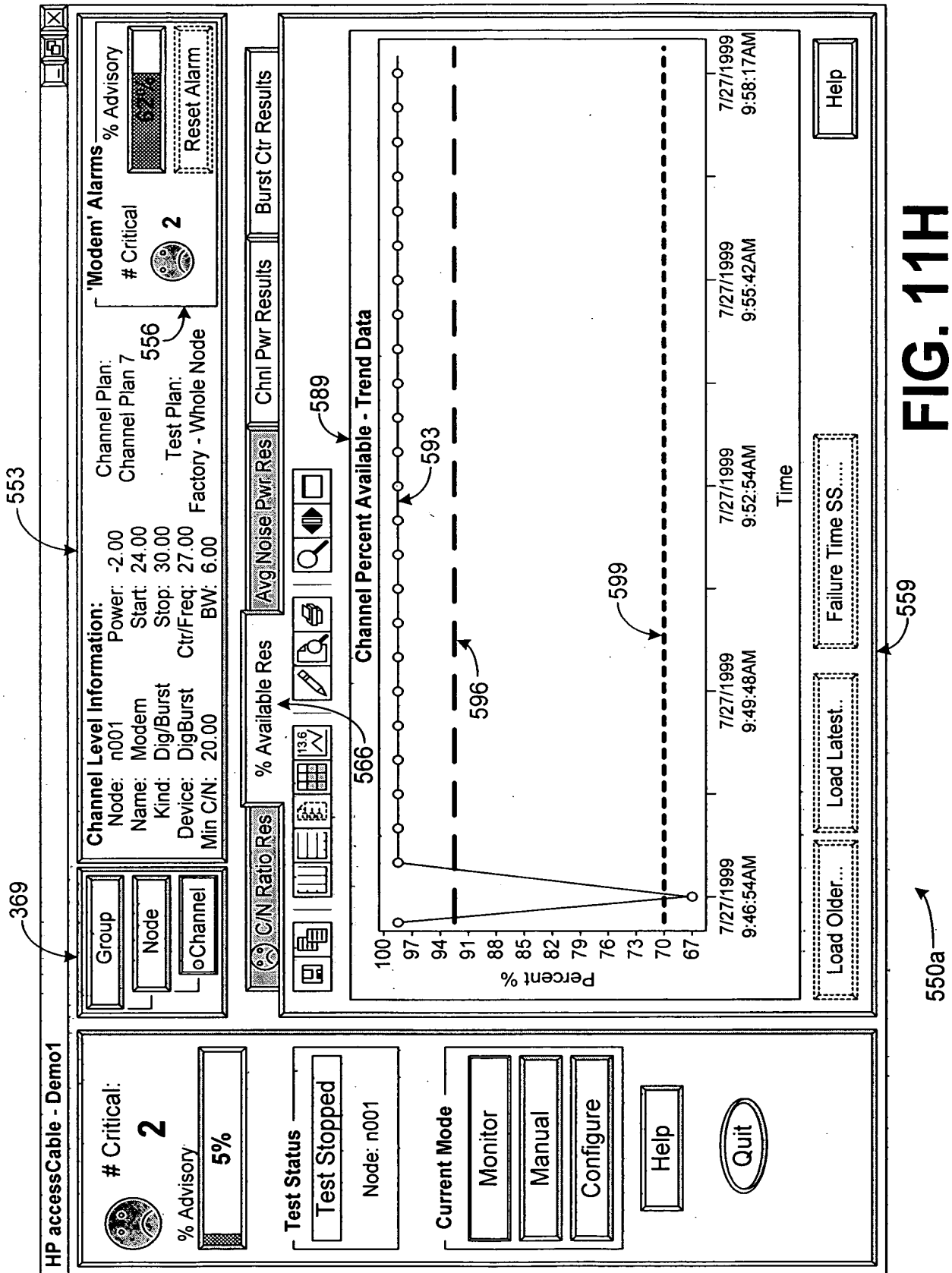


FIG. 11H

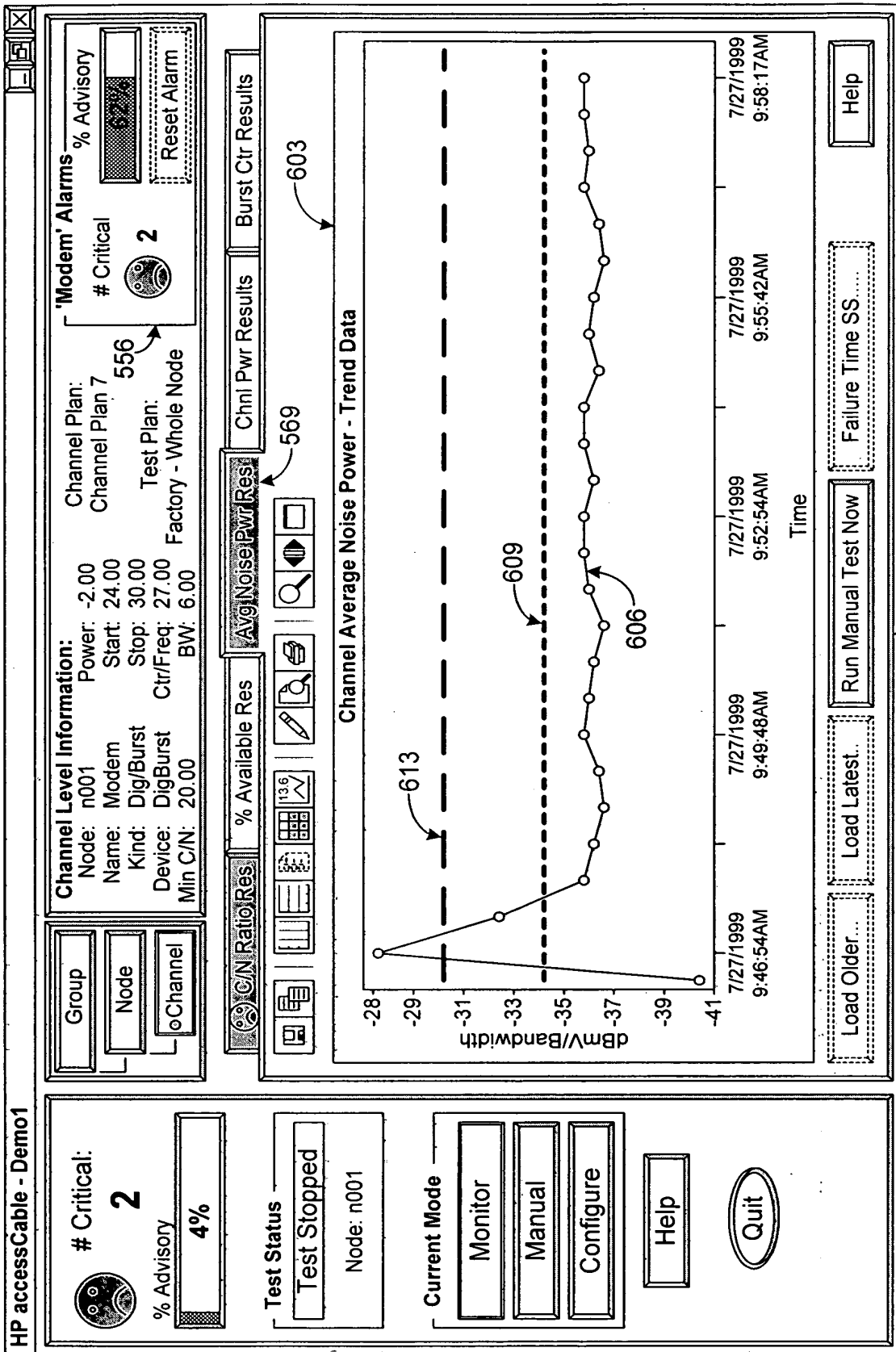


FIG. 111

550c

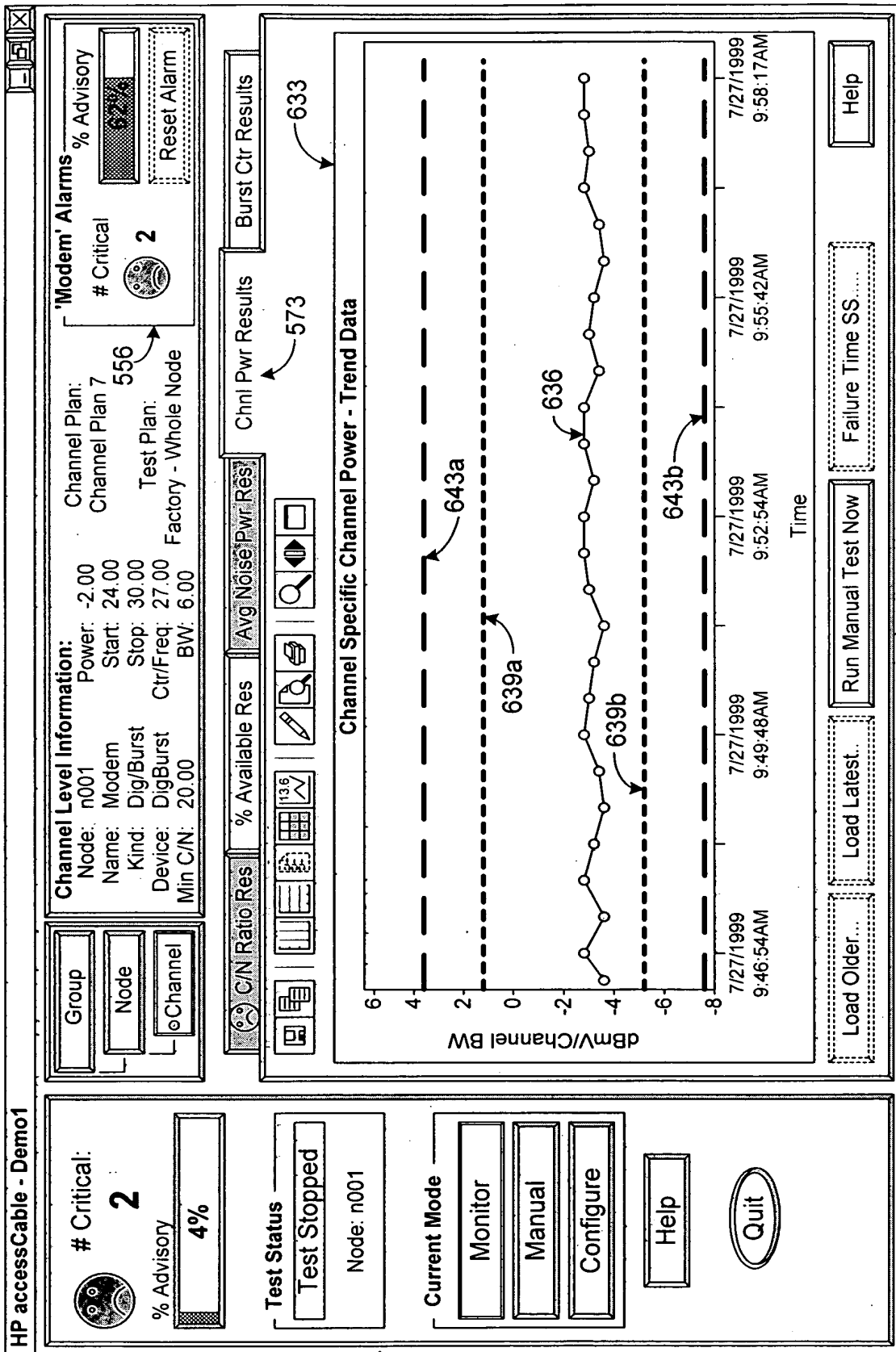


FIG. 11J

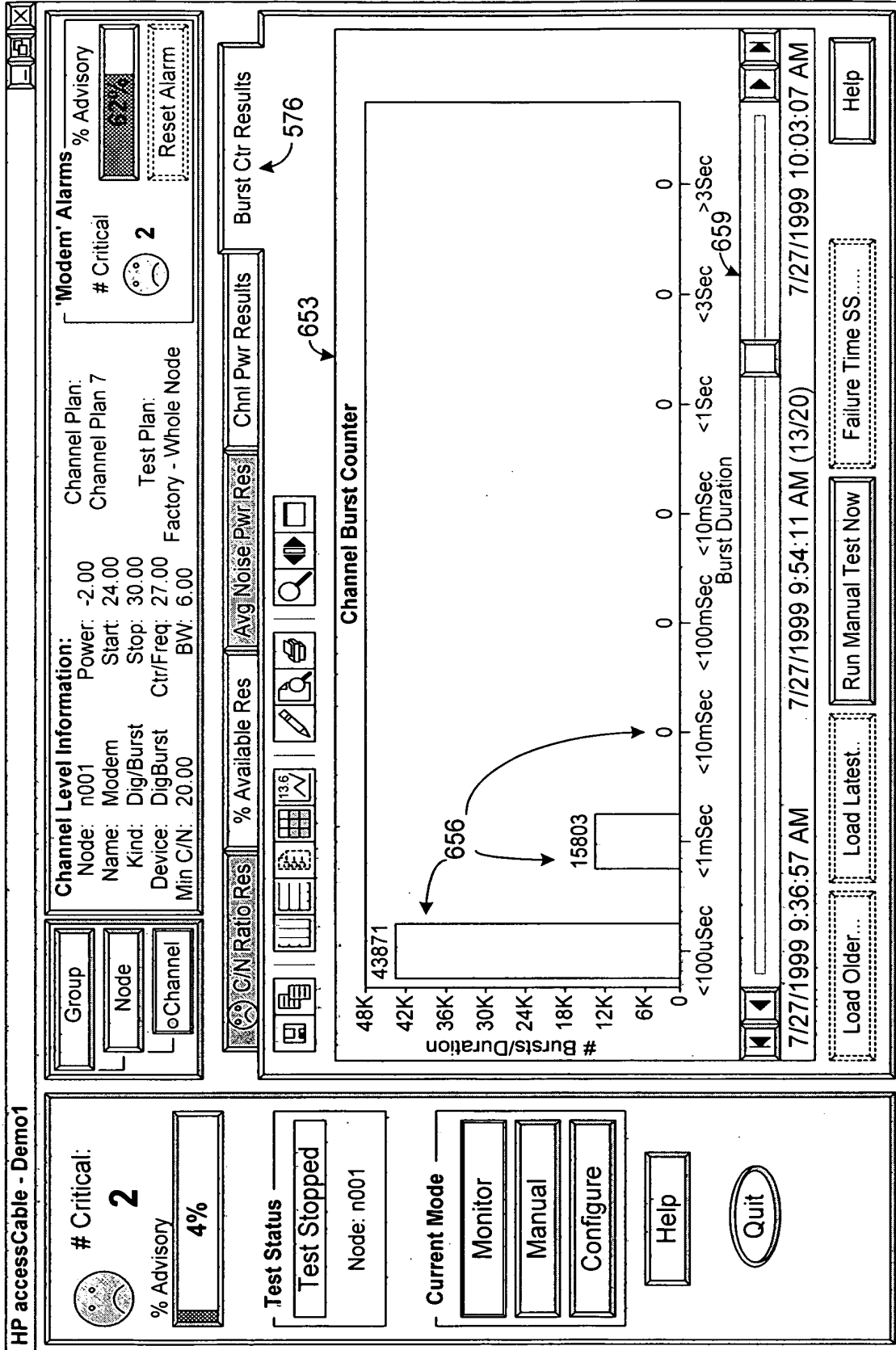


FIG. 11K

TEST CONFIGURATION GUI NAVIGATION

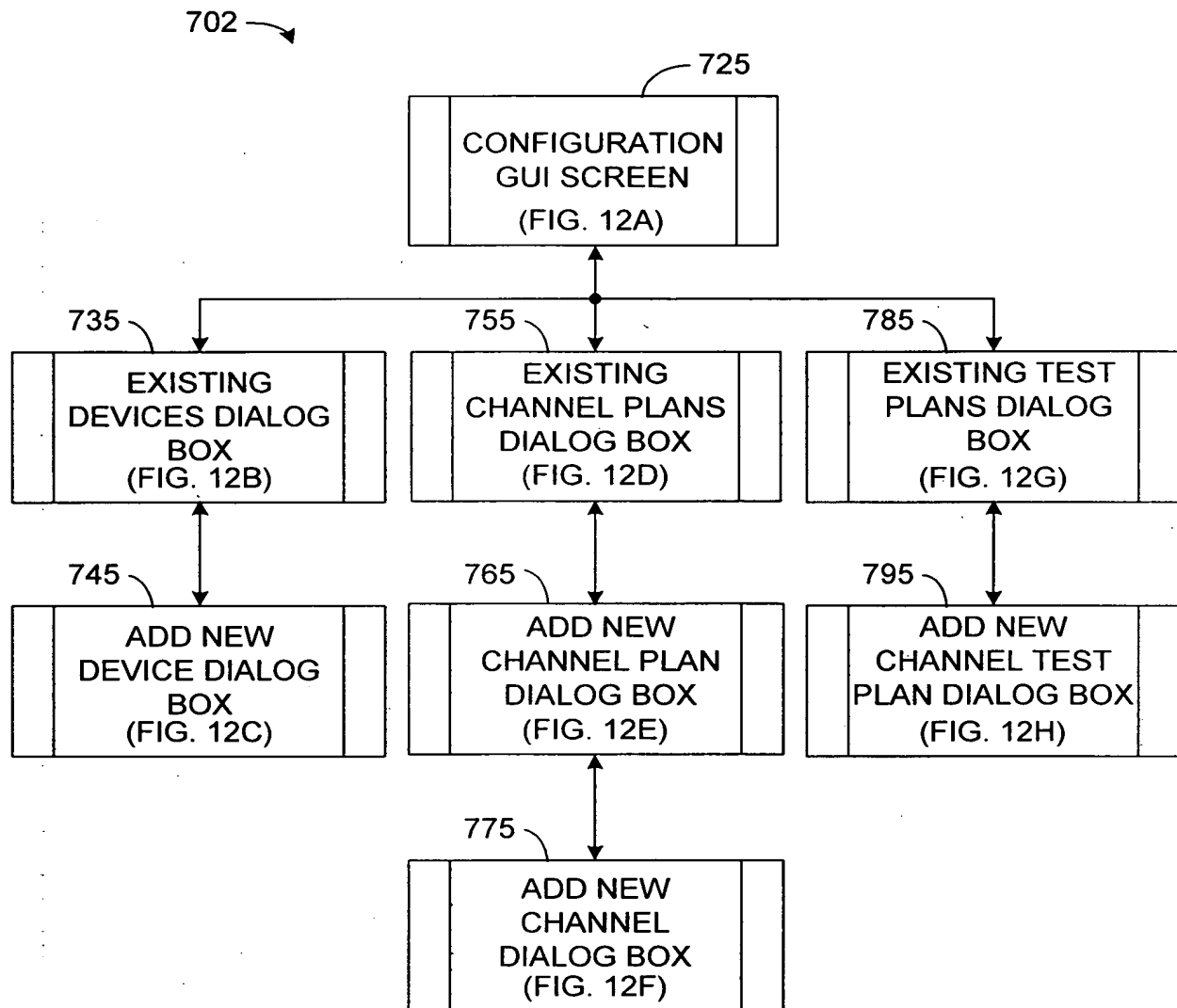


FIG. 12

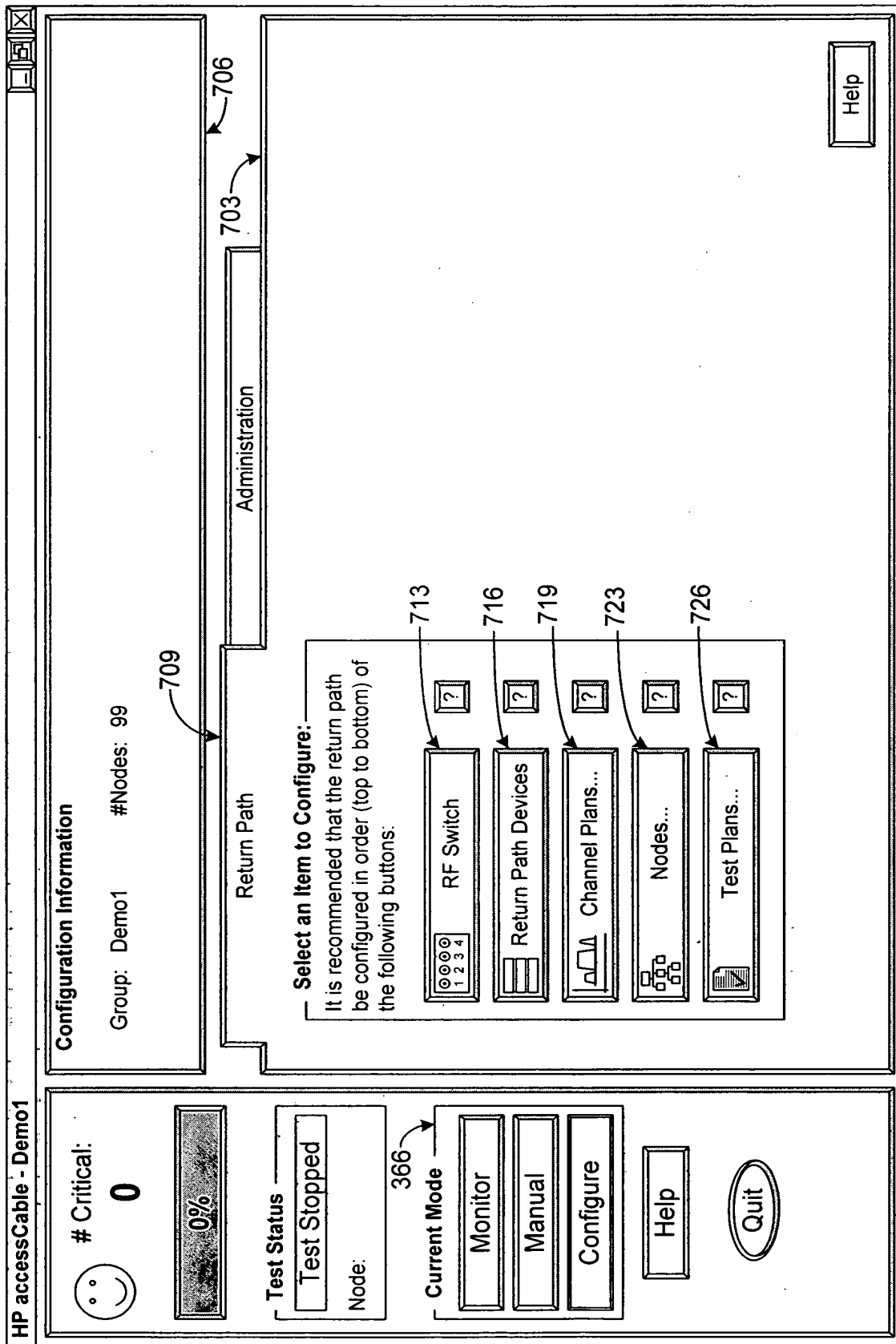


FIG. 12A

Existing Devices

Print...

Existing Devices

736

Name	Bandwidth (MHz)	Power (dB)	Min Op. C/N	Type	Comment
Modem	5.00	-2.00	20.00	Dig/Burst	

739

Add New...

Edit...

Delete...

Close

Help

FIG. 12B

Add a New Device

Add A New Device

Device Attributes

Device Name: 756

Comment: 759

Bandwidth: 763 ☒ MHz (0 - 999) ☐ KHz(0 - 999,999) 764

Channel Power: 776 (dBmV over Bandwidth)

Min Op. C/N: 769 (dB offset from Power)

Type: 773

776 779

753

FIG. 12C

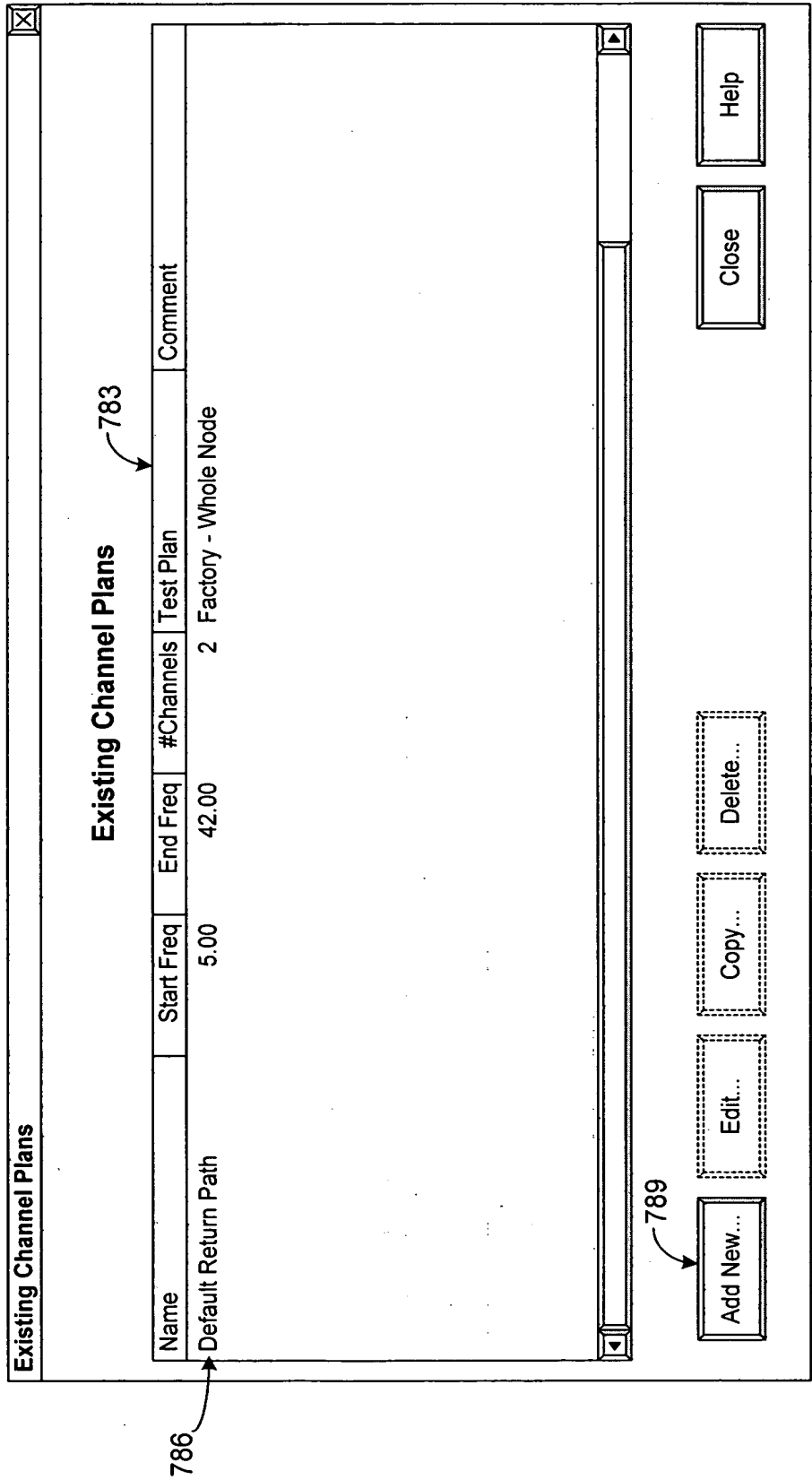


FIG. 12D

Channel Plan

Add a New Channel Plan

Channel Plan Attributes:

Device Name: 803

Whole Node Test Plan: 806

Factory - Whole Node

Comment: 809

This is Channel Plan B

813

Return Path: 816

0

Start Freq (MHz): 819

5

Stop Freq (MHz): 819

42

999

Channels:

View as: 826

List

Sort By: 829

C-Freq

Print... 833

836

Name	Start Freq	Stop Freq	C-Freq	B-Width	Power	Min C/N	Device	CHKind	Test Plan

Add New... 839

Edit...

Copy...

Delete...

OK

Cancel

Help 823

FIG. 12E

800

Add a New Channel

Add A New Channel

Channel Attributes

Name:

ChannelA

Center Frequency

856

Cnt Freq (MHz)

13.0

5

42

☒ Values from a Device

☐ Values Specified Below

863

Device:

MyDevice

859

(Description)

Bandwidth:

4.00

866

(MHz)

Channel Power:

-3.0

869

(dBmV over Bandwidth)

Min Op. C/N:

20

873

(dB offset from Power)

Channel Type:

MyDevice

876

Test Plan:

Factory - Digital Burst FreqHopping Channel

879

OK

Cancel

Help

881

883

850

FIG. 12F

Existing Test Plans

Print...

906

903

Existing Test Plans

Name	Type	Node Pwr	SScan	Noise Pwr	Chan Pwr	Burst	C/N	% Avail
Factory - Analog Continuous Channel	Channel				X		X	X
Factory - Analog Intermittent Channel	Channel						X	X
Factory - Digital Burst Channel	Channel			X	X	X	X	X
Factory - Digital Burst FreqHopping Channel	Channel			X			X	X
Factory - Digital Continuous Channel	Channel				X		X	X
Factory - Digital Continuous FreqHopping...	Channel						X	X
Factory - Future Channel	Channel						X	X
Factory - Whole Node	Whole...	X	X					
No Tests	Channel							

909

911

913

Add New Whole Node Test Plan...

Add New Channel Test Plan...

Edit...

Copy...

Delete...

Close

Help

900

FIG. 12G

Add a New Channel Test Plan

Add A New Channel Test Plan

Test Plan Name: Test Plan 27

993

Disable All Critical Alarms

995

Disable All Advisory Alarms

941

Available Tests and Alarm Limits

940

☒ Average Noise Power

Alarm limits are relative to expected channel power minus min op c/n for the channel.

943

☐ Critical

>

3

(dB)

945

947

☐ Advisory

>

3

(dB)

949

970

☒ Channel Power

Alarm limits are relative to expected channel power level.

973

☐ Critical

>

3

(dB)

974

or

<

3

(dB)

975

977

☐ Advisory

>

3

(dB)

978

or

<

3

(dB)

979

950

☒ Carrier to Noise

Alarm limits are relative to the channel's min op c/n level.

953

☐ Critical

>

3

(dB)

955

957

☐ Advisory

>

9

(dB)

959

960

☒ Burst Counter

Alarm limits are not applicable.

961

☐ Critical

Not Alarmable

☐ Advisory

Not Alarmable

978

☒ % Available

Alarm limits are absolute percentages.

983

☐ Critical

<

60

%

985

987

☐ Advisory

<

90

%

989

997

OK

999

Cancel

Help

925

FIG. 12H